

T G C A T G A T G C A T G G G G

|                                                                 |            |            |            |                    |                 |     |
|-----------------------------------------------------------------|------------|------------|------------|--------------------|-----------------|-----|
| GGGGGCCGCA                                                      | GCCTGGCTA  | CAGCTGGC   | GGCGAAGGTC | AGGCCGACG          | GCAGCCGCA       | 60  |
| CCTGACGGCG                                                      | TGACCGACCC | GAGCCGATT  | CTCTTGGATT | TGGCTACACA         | C TTATAGATC     | 120 |
| TTCTGCACTG                                                      | TTTACAGGCA | CAGTTGCTGA | TATGTGTTCA | AG ATG AGT GGG ATG | Met Ser Gly Met | 174 |
|                                                                 |            |            |            |                    |                 | 1   |
| GGA GAA AAT ACC TCT GAC CCC TCC AGG GCA GAG ACA AGA AAG CGC AAG |            |            |            |                    |                 | 222 |
| Glu Asn Thr Ser Asp Pro Ser Arg Ala Glu Thr Arg Lys Arg Lys     |            |            |            |                    |                 |     |
| 10                                                              | 15         | 20         |            |                    |                 |     |
| GAA TGT CCT GAC CAA CTT GGA CCC AGC CCC AAA AGG AAC ACT GAA AAA |            |            |            |                    |                 | 270 |
| Glu Cys Pro Asp Gln Leu Gly Pro Ser Pro Lys Arg Asn Thr Glu Lys |            |            |            |                    |                 |     |
| 25                                                              | 30         | 35         |            |                    |                 |     |
| CGT AAT CGT GAA CAG GAA AAT AAA TAT ATA GAA CTT GCA GAG TTG     |            |            |            |                    |                 | 318 |
| Arg Asn Arg Glu Gln Glu Asn Lys Tyr Ile Glu Glu Leu Ala Glu Leu |            |            |            |                    |                 |     |
| 40                                                              | 45         | 50         |            |                    |                 |     |
| ATT TTT GCA AAT TTT AAT GAT ATA GAC AAC TTT AAC TTC AAA CCT GAC |            |            |            |                    |                 | 366 |
| Ile Phe Ala Asn Phe Asn Asp Ile Asp Asn Phe Asn Phe Lys Pro Asp |            |            |            |                    |                 |     |
| 55                                                              | 60         | 65         |            |                    |                 |     |
| AAA TGT GCA ATC TTA AAA GAA ACT GTG AAG CAA ATT CGT CAG ATC AAA |            |            |            |                    |                 | 414 |
| Lys Cys Ala Ile Leu Lys Glu Thr Val Lys Gln Ile Arg Gln Ile Lys |            |            |            |                    |                 |     |
| 70                                                              | 75         | 80         |            |                    |                 |     |
| GAA CAA GAG AAA GCA GCA GCT GCC AAC ATA GAT GAA GTG CAG AAG TCA |            |            |            |                    |                 | 462 |
| Glu Gln Glu Lys Ala Ala Ala Asn Ile Asp Glu Val Gln Lys Ser     |            |            |            |                    |                 |     |
| 85                                                              | 90         | 95         |            |                    |                 |     |

FIG. 1A

Figure 1B "Gata360

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| GAT | GTA | TCC | TCT | ACA | GGG | CAG | GGT | GTC | ATC | GAC | AAG | GAT | GCG | CTG | GGG |
| Asp | Val | Ser | Ser | Thr | Gly | Gln | Gly | Val | Ile | Asp | Ala | Leu | Gly |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 510 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| CCT | ATG | ATG | CTT | GAG | GCC | CTT | GAT | GGG | TTC | TTC | TTT | GTA | GTG | AAC | CTG |
| Pro | Met | Met | Leu | Glu | Ala | Leu | Asp | Gly | Phe | Phe | Phe | Val | Val | Asn | Leu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 558 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| GAA | GGC | AAC | GTT | GTG | TTT | GTG | TCA | GAG | AAT | GTG | ACA | CAG | TAT | CTA | AGG |
| Glu | Gly | Asn | Val | Val | Phe | Val | Ser | Glu | Asn | Val | Thr | Gln | Tyr | Leu | Arg |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 606 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| TAT | AAC | CAA | GAA | GAG | CTG | ATG | AAC | AAA | AGT | GTA | TAT | AGC | ATC | TTG | CAT |
| Tyr | Asn | Gln | Glu | Glu | Glu | Leu | Met | Asn | Lys | Ser | Val | Tyr | Ser | Ile | Leu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 654 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| GTT | GGG | GAC | CAC | ACG | GAA | TTT | GTC | AAA | AAC | CTG | CTG | CCA | AAG | TCT | ATA |
| Val | Gly | Asp | His | Thr | Glu | Phe | Val | Lys | Asn | Leu | Leu | Pro | Lys | Ser | Ile |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 702 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| GTA | AAT | GGG | GGA | TCT | TGG | TCT | GCG | GAA | CCT | CCG | AGG | CGG | AAC | AGC | CAT |
| Val | Asn | Gly | Gly | Ser | Trp | Ser | Gly | Glu | Pro | Pro | Arg | Arg | Asn | Ser | His |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 750 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| ACC | TTC | AAT | TGT | CGG | ATG | CTG | GTA | AAA | CCT | TTA | CCT | GAT | TCA | GAA | GAG |
| Thr | Phe | Asn | Cys | Arg | Met | Leu | Val | Lys | Pro | Leu | Pro | Asp | Ser | Glu | Glu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 798 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| GAG | GGT | CAT | GAT | AAC | CAG | GAA | GCT | CAT | CAG | AAA | TAT | GAA | ACT | ATG | CAG |
| Glu | Gly | His | Asp | Asn | Gln | Glu | Ala | His | Gln | Lys | Tyr | Glu | Thr | Met | Gln |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 846 |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

FIG. 1B

Trinucleotide sequence

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| TGC | TTC | GCT | TGC | TCT | CAA | CCA | AAG | TCC | ATC | AAA | GAA | GAA | GAA | GAT |
| Cys | Phe | Ala | Val | Ser | Gln | Pro | Lys | Ser | Ile | Lys | Glu | Glu | Glu | Asp |
| 230 |     |     |     |     |     |     |     |     |     |     | 240 |     |     |     |
| TTG | CAG | TCC | TGC | TTG | ATT | TGC | GTG | GCA | AGA | AGA | GTT | CCC | ATG | AAG |
| Leu | Gln | Ser | Cys | Leu | Ile | Cys | Val | Ala | Arg | Arg | Val | Pro | Met | Lys |
| 245 |     |     |     |     |     |     |     |     |     |     | 255 |     |     |     |
| AGA | CCA | GTT | CTT | CCC | TCA | TCA | GAA | AGT | TTT | ACT | ACT | CGC | CAG | GAT |
| Arg | Pro | Val | Leu | Pro | Ser | Ser | Glu | Ser | Thr | Thr | Arg | Gln | Asp | Leu |
| 260 |     |     |     |     |     |     |     |     |     |     | 270 |     |     |     |
| CAA | GGC | AAG | ATC | ACG | TCT | CTG | GAT | ACC | AGC | ACC | ATG | AGA | GCA | GCC |
| Gln | Gly | Lys | Ile | Thr | Ser | Leu | Asp | Thr | Ser | Thr | Met | Arg | Ala | Ala |
| 275 |     |     |     |     |     |     |     |     |     |     | 285 |     |     |     |
| AAA | CCA | GGC | TGG | GAG | GAC | CTG | GTA | AGA | AGG | TGT | ATT | CAG | AAG | TTC |
| Lys | Pro | Gly | Trp | Glu | Asp | Leu | Val | Arg | Arg | Cys | Ile | Gln | Lys | Phe |
| 290 |     |     |     |     |     |     |     |     |     |     | 300 |     |     |     |
| GCG | CAG | CAT | GAA | GGA | TCT | GTC | TCC | TAT | GCT | AAG | AGG | CAT | CAT | CAT |
| Ala | Gln | His | Glu | Gly | Glu | Ser | Val | Ser | Tyr | Ala | Lys | Arg | His | His |
| 310 |     |     |     |     |     |     |     |     |     | 315 |     |     |     |     |
| GAA | GTA | CTG | AGA | CAA | GGA | TTG | GCA | TTC | AGT | CAA | ATC | TAT | CGT | TTT |
| Gl  | u   | Val | Leu | Arg | Gln | Gly | Leu | Ala | Phe | Ser | Gln | Ile | Tyr | Arg |
| 325 |     |     |     |     |     |     |     |     |     | 330 |     |     |     |     |
| TTG | TCT | GAT | GGC | ACT | CTT | GCT | GCA | CAA | ACG | AAG | AGC | AAA | CTC | ATC |
| Leu | Ser | Asp | Gly | Thr | Leu | Val | Ala | Ala | Gln | Thr | Lys | Ser | Lys | Ile |
| 340 |     |     |     |     |     |     |     |     |     | 350 |     |     |     |     |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

FIG. 1C

"T U G G C T G U " G G G C G C G G G C

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| CGT | TCT | CAG | ACT | ACT | AAT | GAA | CCT | CAA | CTT | GTA | ATA | TCT | TTA | CAT | ATG  | 1278 |
| Arg | Ser | Gln | Thr | Thr | Asn | Glu | Pro | Gln | Leu | Val | Ile | Ser | Leu | His | Met  |      |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 360  |
| CTT | CAC | AGA | GAG | CAG | AAT | GTG | TGT | GTG | ATG | AAT | CCG | GAT | CTG | ACT | GGA  | 1326 |
| Leu | His | Arg | Glu | Gln | Asn | Val | Cys | Val | Met | Asn | Pro | Asp | Leu | Thr | Gly  |      |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 375  |
| CAA | ACG | ATG | GGG | AAG | CCA | CTG | AAT | CCA | ATT | AGC | TCT | AAC | AGC | CCT | GCC  | 1374 |
| Gln | Thr | Met | Gly | Lys | Pro | Leu | Asn | Pro | Ile | Ser | Ser | Asn | Ser | Pro | Ala  |      |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 390  |
| CAT | CAG | GCC | CTG | TGC | AGT | GGG | AAC | CCA | GGT | CAG | GAC | ATG | ACC | CTC | AGT  | 1422 |
| His | Gin | Ala | Leu | Cys | Ser | Gly | Asn | Pro | Gly | Gln | Asp | Met | Thr | Leu | Ser  |      |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 405  |
| AGC | AAT | ATA | AAT | TTT | CCC | ATA | AAT | GGC | CCA | AAG | GAA | CAA | ATG | GGC | ATG  | 1470 |
| Ser | Asn | Ile | Asn | Phe | Pro | Ile | Asn | Gly | Pro | Lys | Glu | Gln | Met | Gly | Met  |      |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 425  |
| CCC | ATG | GGC | AGG | TTT | GGT | TCT | GGG | GGA | ATG | AAC | CAT | GTG | TCA | GGC | 1518 |      |
| Pro | Met | Gly | Arg | Phe | Gly | Gly | Ser | Gly | Gly | Met | Asn | His | Val | Ser | Gly  |      |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 440  |
| ATG | CAA | GCA | ACC | ACT | CCT | CAG | GGT | AGT | AAC | TAT | GCA | CTC | AAA | ATG | AAC  | 1566 |
| Met | Gln | Ala | Thr | Thr | Pro | Gln | Gly | Ser | Asn | Tyr | Ala | Leu | Lys | Met | Asn  |      |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 455  |
| AGC | CCC | TCA | CAA | AGC | CCT | GGC | ATG | AAT | CCA | GGA | CAG | CCC | ACC | TCC | 1614 |      |
| Ser | Pro | Ser | Gln | Ser | Ser | Pro | Gly | Met | Asn | Pro | Gly | Gln | Pro | Thr | Ser  |      |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 470  |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 480  |

**FIG. 1D**

Translation

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|------|
| ATG | CTT | TCA | CCA | AGG | CAT | CGC | ATG | AGC | CCT | GGA | GTG | GCT | GGC | AGC | CCT |  | 1662 |
| Met | Leu | Ser | Pro | Arg | His | Arg | Met | Ser | Pro | Gly | Val | Ala | Gly | Ser | Pro |  |      |
| 485 |     |     |     |     |     |     |     |     |     | 495 |     |     |     |     |     |  |      |
| CGA | ATC | CCA | CCC | AGT | CAG | TTT | TCC | CCT | GCA | GGA | AGC | TTG | CAT | TCC | CCT |  | 1710 |
| Arg | Ile | Pro | Pro | Ser | Gln | Phe | Ser | Pro | Ala | Gly | Ser | Leu | His | Ser | Pro |  |      |
|     |     |     |     |     |     |     |     |     |     | 510 |     |     |     |     |     |  |      |
| GTG | GGA | GTT | TGC | AGC | AGC | ACA | GGA | AAT | AGC | CAT | AGT | TAT | ACC | AAC | AGC |  | 1758 |
| Val | Gly | Val | Cys | Ser | Ser | Thr | Gly | Asn | Ser | His | Ser | Tyr | Thr | Asn | Ser |  |      |
|     |     |     |     |     |     |     |     |     |     | 525 |     |     |     |     |     |  |      |
| TCC | CTC | AAT | GCA | CTT | CAG | GCC | CTC | AGC | GAG | GGG | CAC | GGG | GTC | TCA | TTA |  | 1806 |
| Ser | Leu | Asn | Ala | Leu | Gln | Ala | Leu | Ser | Glu | Gly | His | Gly | Val | Ser | Leu |  |      |
|     |     |     |     |     |     |     |     |     |     | 540 |     |     |     |     |     |  |      |
| GGG | TCA | TCG | TTG | GCT | TCA | CCA | GAC | CTA | AAA | ATG | GGC | AAT | TTG | CAA | AAC |  | 1854 |
| Gly | Ser | Ser | Leu | Ala | Ser | Pro | Asp | Leu | Lys | Met | Gly | Asn | Leu | Gln | Asn |  |      |
|     |     |     |     |     |     |     |     |     |     | 555 |     |     |     |     |     |  |      |
| TCC | CCA | GTT | AAT | ATG | AAT | CCT | CCC | CCA | CTC | AGC | AAG | ATG | GGA | AGC | TTG |  | 1902 |
| Ser | Pro | Val | Asn | Met | Asn | Pro | Pro | Pro | Leu | Ser | Lys | Met | Gly | Ser | Leu |  |      |
|     |     |     |     |     |     |     |     |     |     | 565 |     |     |     |     |     |  |      |
| GAC | TCA | AAA | GAC | TGT | TTT | GGA | CTA | TAT | GGG | GAG | CCC | TCT | GAA | GGT | ACA |  | 1950 |
| Asp | Ser | Lys | Asp | Cys | Phe | Gly | Leu | Tyr | Gly | Glu | Pro | Ser | Glu | Gly | Thr |  |      |
|     |     |     |     |     |     |     |     |     |     | 585 |     |     |     |     |     |  |      |
| ACT | GGA | CAA | GCA | GAG | AGC | AGC | TGC | CAT | CCT | GGA | GAG | CAA | AAG | GAA | ACA |  | 1998 |
| Thr | Gly | Gln | Ala | Glu | Ser | Ser | Cys | His | Pro | Gly | Glu | Gln | Lys | Glu | Thr |  |      |
|     |     |     |     |     |     |     |     |     |     | 605 |     |     |     |     |     |  |      |

FIG. 1E

T C G T T A T T G C G C G T T G C G C G

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| AAT | GAC | CCC | AAC | CTG | CCC | CCG | GCC | GTG | AGC | AGT | GAG | AGA | GCT | GAC | GGG | 2046 |
| Asn | Asp | Pro | Asn | Leu | Pro | Pro | Ala | Val | Ser | Ser | Glu | Arg | Ala | Asp | Gly | 625  |
| 615 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| CAG | AGC | AGA | CTG | CAT | GAC | AGC | AAA | GGG | CAG | ACC | AAA | CTC | CTG | CAG | CTG | 2094 |
| Gln | Ser | Arg | Leu | His | Asp | Ser | Lys | Gly | Gln | Thr | Lys | Leu | Gln | Leu |     |      |
| 630 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| CTG | ACC | ACC | AAA | TCT | GAT | CAG | ATG | GAG | CCC | TCG | CCC | TTA | GCC | AGC | TCT | 2142 |
| Leu | Thr | Thr | Lys | Ser | Asp | Gln | Met | Glu | Pro | Pro | Ser | Pro | Leu | Ala | Ser | 660  |
| 645 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| TTG | TCG | GAT | ACA | AAC | AAA | GAC | TCC | ACA | GGT | AGC | TTG | CCT | GGT | TCT | GGG | 2190 |
| Leu | Ser | Asp | Thr | Asn | Lys | Asp | Ser | Thr | Gly | Ser | Leu | Pro | Gly | Ser | Gly | 675  |
| 665 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| TCT | ACA | CAT | GGA | ACC | TCG | CTC | AAG | GAG | AAG | CAT | AAA | ATT | TTG | CAC | AGA | 2238 |
| Ser | Thr | His | Gly | Thr | Ser | Leu | Lys | Glu | Lys | His | Lys | Ile | Leu | His | Arg | 680  |
| 685 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| CTC | TTG | CAG | GAC | AGC | AGT | TCC | CCT | GTG | GAC | TTG | GCC | AAG | TTA | ACA | GCA | 2286 |
| Leu | Leu | Gln | Asp | Ser | Ser | Ser | Pro | Val | Asp | Leu | Ala | Lys | Leu | Thr | Ala | 705  |
| 695 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| GAA | GCC | ACA | GGC | AAA | GAC | CTG | AGC | CAG | GAG | TCC | AGC | AGC | ACA | GCT | CCT | 2334 |
| Glu | Ala | Ala | Thr | Gly | Lys | Asp | Leu | Ser | Gln | Glu | Ser | Ser | Ser | Thr | Ala | 715  |
| 710 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| GGA | TCA | GAA | GTG | ACT | ATT | AAA | CAA | GAG | CCG | GTG | AGC | CCC | AAG | AAG | AAA | 2382 |
| Gly | Ser | Glu | Vai | Thr | Ile | Lys | Gln | Glu | Pro | Vai | Ser | Pro | Lys | Lys | Lys | 735  |
| 725 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |

**FIG. 1F**

# T-DNA Insertion Site

|                                                                                                                                    |      |
|------------------------------------------------------------------------------------------------------------------------------------|------|
| GAG AAT GCA CTA CTT CGC TAT TTG CTA GAT AAA GAT GAT ACT AAA GAT<br>Glu Asn Ala Leu Leu Arg Tyr Leu Asp Asp Thr Lys Asp             | 2430 |
| ATT GGT TTA CCA GAA ATA ACC CCC AAA CTT GAG AGA CTG GAC AGT AAG<br>Ile Gly Leu Pro Glu Ile Thr Pro Lys Leu Glu Arg Leu Asp Ser Lys | 2478 |
| ACA GAT CCT GCC AGT AAC ACA AAA TTA ATA GCA ATG AAA ACT GAG AAG<br>Thr Asp Pro Ala Ser Asn Thr Lys Leu Ile Ala Met Lys Thr Glu Lys | 2526 |
| GAG GAG ATG AGC TTT GAG CCT GGT GAC CAG CCT GGC AGT GAG CTG GAC<br>Glu Glu Met Ser Phe Glu Pro Gly Asp Gln Pro Gly Ser Glu Leu Asp | 2574 |
| AAC TTG GAG ATT TTG GAT TTG CAG AAT AGT CAA TTA CCA CAG<br>Asn Leu Glu Ile Leu Asp Asp Leu Gln Asn Ser Gln Leu Pro Gln             | 2622 |
| CTT TTC CCA GAC ACG AGG CCA GGC GCC CCT GCT GGA TCA GTT GAC AAG<br>Leu Phe Pro Asp Thr Arg Pro Gly Ala Pro Ala Gly Ser Val Asp Lys | 2670 |
| CAA GCC ATC ATC AAT GAC CTC ATG CAA CTC ACA GCT GAA AAC AGC CCT<br>Gln Ala Ile Ile Asn Asp Leu Met Gln Leu Thr Ala Glu Asn Ser Pro | 2718 |
| GTC ACA CCT GTT GGA GCC CAG AAA ACA GCA CTG CGA ATT TCA CAG AGC<br>Val Pro Val Gly Ala Gln Lys Thr Ala Leu Arg Ile Ser Gln Ser     | 2766 |

**FIG. 1 G**

TGT GCT ACC AGT GCC ATG AAC CGG CAA GTC CAA GGA GGT ATG

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| ACT | TTT | AAT | AAC | CCA | CGA | CCA | GGG | CAA | CTG | GGC | AGG | TTA | TTG | CCA | AAC | 2814 |
| Thr | Phe | Asn | Asn | Pro | Arg | Pro | Gly | Gln | Leu | Gly | Arg | Leu | Leu | Pro | Asn |      |
| 870 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| CAG | AAT | TTA | CCA | CTT | GAC | ATC | ACA | TTG | CAA | AGC | CCA | ACT | GGT | GCA |     | 2862 |
| Gln | Asn | Leu | Pro | Leu | Asp | Ile | Thr | Leu | Gln | Ser | Pro | Thr | Gly | Ala | Gly |      |
| 885 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| CCT | TTC | CCA | CCA | ATC | AGA | AAC | AGT | AGT | CCC | TAC | TCA | GTG | ATA | CCT | CAG | 2910 |
| Pro | Phe | Pro | Pro | Ile | Arg | Asn | Ser | Ser | Pro | Tyr | Ser | Val | Ile | Pro | Gln |      |
| 905 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| CCA | GGA | ATG | ATG | GGT | AAT | CAA | GGG | ATG | ATA | GGA | AAC | CAA | GGA | AAT | TTA | 2958 |
| Pro | Gly | Met | Met | Gly | Asn | Gln | Gly | Met | Ile | Gly | Asn | Gln | Gly | Asn | Leu |      |
| 920 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| GGG | AAC | AGT | AGC | ACA | GGA | ATG | ATT | GGT | AAC | AGT | GCT | TCT | CGG | CCT | ACT | 3006 |
| Gly | Asn | Ser | Ser | Thr | Gly | Met | Ile | Gly | Asn | Ser | Ala | Ser | Arg | Pro | Thr |      |
| 935 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| ATG | CCA | TCT | GGA | GAA | TGG | GCA | CCG | CAG | AGT | TCG | GCT | GTG | AGA | GTC | ACC | 3054 |
| Met | Pro | Ser | Gly | Glu | Trp | Ala | Pro | Gln | Ser | Ser | Ala | Vai | Arg | Vai | Thr |      |
| 950 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| TGT | GCT | GCT | ACC | ACC | AGT | GCC | ATG | AAC | CGG | CCA | GTC | CAA | GGA | GGT | ATG | 3102 |
| Cys | Ala | Ala | Ala | Thr | Thr | Ser | Ala | Met | Asn | Arg | Pro | Val | Gln | Gly | Met |      |
| 965 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
| ATT | CGG | AAC | CCA | GCA | GCC | AGC | ATC | CCC | ATG | AGG | CCC | AGC | CAG | CCT |     | 3150 |
| Ile | Arg | Asn | Pro | Ala | Ala | Ser | Ile | Pro | Met | Arg | Pro | Ser | Ser | Gln | Pro |      |
| 985 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |

FIG. 1H

T G G A T T C G G G C C T G G

|      |      |      |     |     |     |     |     |     |     |     |     |     |     |     |      |
|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| GGC  | CAA  | AGA  | CAG | ACG | CTT | CAG | TCT | CAG | GTC | ATG | AAT | ATA | GGG | CCA | TCT  |
| Gly  | Gln  | Arg  | Gln | Thr | Leu | Gln | Ser | Gln | Val | Met | Asn | Ile | Gly | Pro | Ser  |
| 1000 | 1005 | 1010 |     |     |     |     |     |     |     |     |     |     |     |     | 3198 |
| GAA  | TTA  | GAG  | ATG | AAC | ATG | GGG | GGG | CCT | CAG | TAT | AGC | CAA | CAA | GCT | 3246 |
| Glu  | Leu  | Glu  | Met | Asn | Met | Gly | Gly | Pro | Gln | Tyr | Ser | Gln | Gln | Ile |      |
| 1015 | 1020 | 1025 |     |     |     |     |     |     |     |     |     |     |     |     |      |
| CCT  | CCA  | AAT  | CAG | ACT | GCC | CCA | TGG | CCT | GAA | AGC | ATC | CTG | CCT | ATA | GAC  |
| Pro  | Pro  | Asn  | Gln | Thr | Ala | Pro | Trp | Pro | Glu | Ser | Ile | Leu | Pro | Ile | Asp  |
| 1030 | 1035 | 1040 |     |     |     |     |     |     |     |     |     |     |     |     | 3294 |
| CAG  | GCG  | TCT  | TTT | GCC | AGC | CAA | AAC | AGG | CAG | CCA | TTT | GGC | AGT | TCT | CCA  |
| Gln  | Ala  | Ser  | Phe | Ala | Ser | Gln | Asn | Arg | Gln | Pro | Phe | Gly | Ser | Ser | Pro  |
| 1045 | 1050 | 1055 |     |     |     |     |     |     |     |     |     |     |     |     | 3342 |
| GAT  | GAC  | TTG  | CTA | TGT | CCA | CAT | CCT | GCA | GCT | GAG | TCT | CCG | AGT | GAT | GAG  |
| Asp  | Asp  | Leu  | Leu | Cys | Pro | His | Pro | Ala | Ala | Glu | Ser | Pro | Ser | Asp | Glu  |
| 1065 | 1070 | 1075 |     |     |     |     |     |     |     |     |     |     |     |     | 3390 |
| GGA  | GCT  | CTC  | CTG | GAC | CAG | CTG | TAT | CTG | GCC | TTG | CGG | AAT | TTT | GAT | GGC  |
| Gly  | Ala  | Leu  | Leu | Asp | Gln | Leu | Tyr | Leu | Ala | Leu | Arg | Asn | Phe | Asp | Gly  |
| 1080 | 1085 | 1090 |     |     |     |     |     |     |     |     |     |     |     |     | 3438 |
| CTG  | GAG  | GAT  | ATT | GAT | AGA | GCC | TTA | GGA | ATA | CCC | GAA | CTG | GTC | AGC | CAG  |
| Leu  | Glu  | Ile  | Ile | Asp | Arg | Ala | Leu | Gly | Ile | Pro | Glu | Leu | Val | Ser | Gln  |
| 1095 | 1100 | 1105 |     |     |     |     |     |     |     |     |     |     |     |     | 3486 |
| AGC  | CAA  | GCA  | GTA | GAT | CCA | GAA | CAG | TTC | TCA | AGT | CAG | GAT | TCC | AAC | ATC  |
| Ser  | Gln  | Ala  | Val | Asp | Pro | Glu | Gln | Phe | Ser | Ser | Gln | Asp | Ser | Asn | Ile  |
| 1110 | 1115 | 1120 |     |     |     |     |     |     |     |     |     |     |     |     | 3534 |

**FIG. 11**

T G G A T C C G G T T C T G G C

|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| ATG  | CTG | GAG | CAG | AAG | GCG | CCC | GTT | TTC | CCA | CAG | TAT | GCA | TCT | CAG | 3582 |
| Met  | Leu | Glu | Gln | Lys | Ala | Pro | Val | Phe | Pro | Gln | Gln | Tyr | Ala | Ser | Gln  |
| 1125 |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1140 |
| GCA  | CAA | ATG | GCC | CAG | GGT | AGC | TAT | TCT | CCC | ATG | CAA | GAT | CCA | AAC | 3630 |
| Ala  | Gln | Met | Ala | Gln | Gly | Ser | Tyr | Ser | Pro | Met | Gln | Asp | Pro | Asn | Phe  |
|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1155 |
| CAC  | ACC | ATG | GGA | CAG | GGG | CCT | AGT | TAT | GCC | ACA | CTC | CGT | ATG | CAG | 3678 |
| His  | Thr | Met | Gly | Gln | Arg | Pro | Ser | Tyr | Ala | Thr | Leu | Arg | Met | Gln | Pro  |
|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1170 |
| AGA  | CCG | GGC | CTC | AGG | CCC | ACG | GGC | CTA | GTG | CAG | AAC | CAG | CCA | AAT | 3726 |
| Arg  | Pro | Gly | Leu | Arg | Pro | Thr | Gly | Leu | Val | Gln | Asn | Gln | Pro | Asn | Gln  |
|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1185 |
| CTA  | AGA | CTT | CAA | CTT | CAG | CAT | CGC | CTC | CAA | GCA | CAG | CAG | AAT | GGC | 3774 |
| Leu  | Arg | Leu | Gln | Leu | Gln | His | Arg | Leu | Gln | Ala | Gln | Gln | Asn | Arg | Gln  |
|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1190 |
| CCA  | CTT | ATG | AAT | CAA | ATC | AGC | AAT | GTT | TCC | AAT | GTG | AAC | TTG | ACT | 3822 |
| Pro  | Leu | Met | Asn | Gln | Ile | Ser | Asn | Val | Ser | Asn | Val | Asn | Leu | Thr | CTG  |
|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1205 |
| AGG  | CCT | GGA | GTA | CCA | ACA | CAG | GCA | CCT | ATT | AAT | GCA | CAG | ATG | CTG | 3870 |
| Arg  | Pro | Gly | Val | Pro | Thr | Gln | Ala | Pro | Ile | Asn | Ala | Gln | Met | Leu | Ala  |
|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1225 |
| CAG  | AGA | CAG | AGG | GAA | ATC | CTG | AAC | CAG | CAT | CTT | CGA | CAG | AGA | CAA | 3918 |
| Gln  | Arg | Gln | Arg | Glu | Ile | Leu | Asn | Gln | His | Leu | Arg | Gln | Arg | Gln | Met  |
|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1240 |
|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1245 |

**FIG. 1J**

TCG GAT TGT " GAG GAT GAT GCG

|                                                                 |      |
|-----------------------------------------------------------------|------|
| CAT CAG CAA CAG CAA GTT CAG CAA CGA ACT TTG ATG AGA GGA CAA     | 3966 |
| His Gln Gln Gln Val Gln Arg Thr Leu Met Met Arg Gly Gln         | 1255 |
| GCG TTG AAT ATG ACA CCA AGC ATG GTG GCT CCT AGT GGT ATG CCA GCA | 4014 |
| Gly Leu Asn Met Thr Pro Ser Met Val Ala Pro Ser Gly Met Pro Ala | 1260 |
| ACT ATG AGC AAC CCT CGG ATT CCC CAG GCA AAT GCA CAG CAG TTT CCA | 4062 |
| Thr Met Ser Asn Pro Arg Ile Pro Gln Ala Asn Ala Gln Gln Phe Pro | 1270 |
| 1285                                                            | 1290 |
| 1295                                                            | 1300 |
| TTT CCT CCA AAC TAC GGA ATA AGT CAG CAA CCT GAT CCA GGC TTT ACT | 4110 |
| Phe Pro Asn Tyr Gly Ile Ser Gln Gin Pro Asp Pro Gly Phe Thr     | 1305 |
| 1310                                                            | 1315 |
| GGG GCT AUG ACT CCC CAG AGC CCA CTT ATG TCA CCC CGA ATG GCA CAT | 4158 |
| Gly Ala Thr Pro Gln Ser Pro Leu Met Ser Pro Arg Met Ala His     | 1320 |
| 1325                                                            | 1330 |
| ACA CAG AGT CCC ATG ATG CAA CAG TCT CAG GCC AAC CCA GCC TAT CAG | 4206 |
| Thr Gln Ser Pro Met Met Gln Ser Gln Ala Asn Pro Ala Tyr Gln     | 1335 |
| 1340                                                            | 1345 |
| GCC CCC TCC GAC ATA AAT GGA TGG GCG CAG GGG AAC ATG GGC GGA AAC | 4254 |
| Ala Pro Ser Asp Ile Asn Gly Trp Ala Gln Gly Asn Met Gly Gln Asn | 1350 |
| 1355                                                            | 1360 |
| AGC ATG TTT TCC CAG CAG TCC CCA CCA CAC TTT GGG CAG CAA GCA AAC | 4302 |
| Ser Met Phe Ser Gln Gln Ser Pro Pro His Phe Gly Gln Gln Ala Asn | 1365 |
| 1370                                                            | 1375 |
| 1380                                                            | 1380 |

**FIG. 1K**

T G C T T G A C T T G C G C G T T G C G C

|                                                                   |      |
|-------------------------------------------------------------------|------|
| ACC AGC ATG TAC AGT AAC AAC ATG AAT GTG TCC ATG GCG ACC           | 4350 |
| Thr Ser Met Tyr Ser Asn Asn Met Asn Ile Asn Val Ser Met Ala Thr   | 1395 |
| AAC ACA GGT GGC ATG AGC AGC ATG AAC CAG ATG ACA GGA CAG ATC AGC   | 4398 |
| Asn Thr Gly Gly Met Ser Ser Met Asn Gln Met Thr Gly Gln Ile Ser   | 1400 |
| ATG ACC TCA GTG ACC TCC GTG TCT ACG TCA GGG CTG TCC ATG GGT       | 4446 |
| Met Thr Ser Val Thr Ser Val Ser Gly Leu Ser Ser Met Gly           | 1415 |
| CCC GAG CAG GTT AAT GAT CCT GCT GCT AGG GGA GGC AAC CTG TTC CCA   | 4494 |
| Pro Glu Gln Val Asn Asp Pro Ala Leu Arg Gly Gly Asn Leu Phe Pro   | 1430 |
| AAC CAG CCT GGA ATG GAT ATT AAG CAG GAG GGA GAC ACA ACA           | 4542 |
| Asn Gln Leu Pro Gly Met Asp Met Ile Lys Gln Glu Gly Asp Thr Thr   | 1445 |
| CGG AAA TAT TGC TGACACTGCT GAAGCCAGTT GCTTCCTCAG CTGACCGGGC       | 4594 |
| Arg Lys Tyr Cys                                                   | 1450 |
| TCACTTGCTC AAAACACTTC CAGTCTGGAG AGCTGTGTCT ATTTGTTCA ACCAACTGA   | 4654 |
| CCTGCCAGCC GGTTCTGCTA GAGGAGACAG GCCTGGCCCT GGTTCCAGG GTGGGTCACA  | 4714 |
| CTCGGCTGTG GCAGGAGGAG CTGCCTCTTC TCTTGACAGT CTGAAGCTCG CATCCAGACA | 4774 |
| GTCGCTCAGT CTGTTCCCTG CATTCACTT AGTGCAACTT AGATCTCTCC TCCCCAAGTA  | 4834 |

FIG. 1L

图 1M

|            |            |             |            |            |             |      |
|------------|------------|-------------|------------|------------|-------------|------|
| AATGTTGACA | GGCCAATTTC | ATACCCATGT  | CAGATTGAAT | GTATTAAAT  | GTATGTATT   | 4894 |
| AGGAGAAC   | ATGCTCTTGT | TCTGTTCTG   | TTGGTTCCA  | GACACTGGT  | TCTTGCTTTG  | 4954 |
| TTTCCCTGG  | CTAACAGTCT | AGTGCCAAG   | ATTAAGATT  | TATCTGGGG  | AAAGAAAAGA  | 5014 |
| ATTTTAA    | AAATTAAACT | AAAGATGTT   | TAAGCTAAAG | CCTGAATTG  | GGATGGAAAGC | 5074 |
| AGGACAGACA | CCGGACAG   | CGCTGTATT   | ACAGACACAC | CCAGTGCCTG | AAGACAAACA  | 5134 |
| AAGTCACAGT | CGTATCTA   | GAAAGCTTA   | AAGACCATGT | TGGAAGAGT  | CTCCAGTTAC  | 5194 |
| TGAACAGATG | AAAAGGAGCC | TGTGAGAGGG  | CTGTTAACAT | TAGCAAATAT | TTTTCCCTTG  | 5254 |
| TTTTTCTTT  | GTAAACCA   | AACTGGTCA   | CCTGAATCAT | GAATTGAGAA | GAATAAATT   | 5314 |
| TCAATTCTAA | ATTAAGTCCC | TTTAGTTTG   | ATCAGACAGC | TTGAATCAGC | ATCTCTTCTT  | 5374 |
| CCCTGTCAGC | CTGACTCTTC | CCTTCCCCCTC | TCTCATTCCC | CATACTCCCT | ATTTTCATTC  | 5434 |
| CTTTTTAAA  | AAATAATAAA | AGCTACAGAA  | ACCAAGTAAG | CCCTTTATT  | CCTTAAATGT  | 5494 |
| TTGCCAGCC  | ACTTACCAAT | TGCTAAGTAT  | TGAATTTCAG | AAAAAAAAT  | TGCATTACT   | 5554 |
| GGCAAGGAGA | AGAGCAAAGT | TAAGGCTGTA  | TACCAATCGA | GCTAAGGATA | CCTGCTTTGG  | 5614 |
| AAGCATGTTT | ATTCTGTTCC | CCAGCAACTC  | TGGCTCCAA  | AATGGGAGAA | ACGCCAGTGT  | 5674 |
| GTTTAAATTG | ATAGCAGATA | TCACGACAGA  | TTAACCTCT  | GCCATGTGTT | TTTTTATTTG  | 5734 |
| TTTTTTAGCA | GTGCTGACTA | AGCCGAAGT   | TTGTAAGGTA | CATAAAATCC | AATTATATG   | 5794 |

FIG. 1M

|                                                                     |            |      |
|---------------------------------------------------------------------|------------|------|
| TAAACAAGCA ATAATTAAAG TTGAGAACTT ATGTGTTTA ATTGATAAAT               | TTTGTTGAGG | 5854 |
| TATACATATT GTGGAATTGA CTCAAAATG AGGTACTTCA GTATTAATT AGATATCTTC     |            | 5914 |
| ATAGCAATGT CTCCTAAAGG TGTTTTGTAA AGGATAATCAA TGCCCTTGATT AGACCTAATT |            | 5974 |
| TGTAGACTTA AGACTTTTA TTTTCTAAC CTTGTGATT TGCTTATAAG TCATTTATCT      |            | 6034 |
| AATCTTATAG ATATGCAGCC GCTGTAGGAA CCAATTCTTG ATTTTATAT GTTTATATC     |            | 6094 |
| TTTCTTAATG AACCTTAGAA AGACTACATG TTACTAAGCA GGCCACTTTT ATGGTTGTTT   |            | 6154 |
| TT                                                                  |            | 6156 |

## FIG. 1N

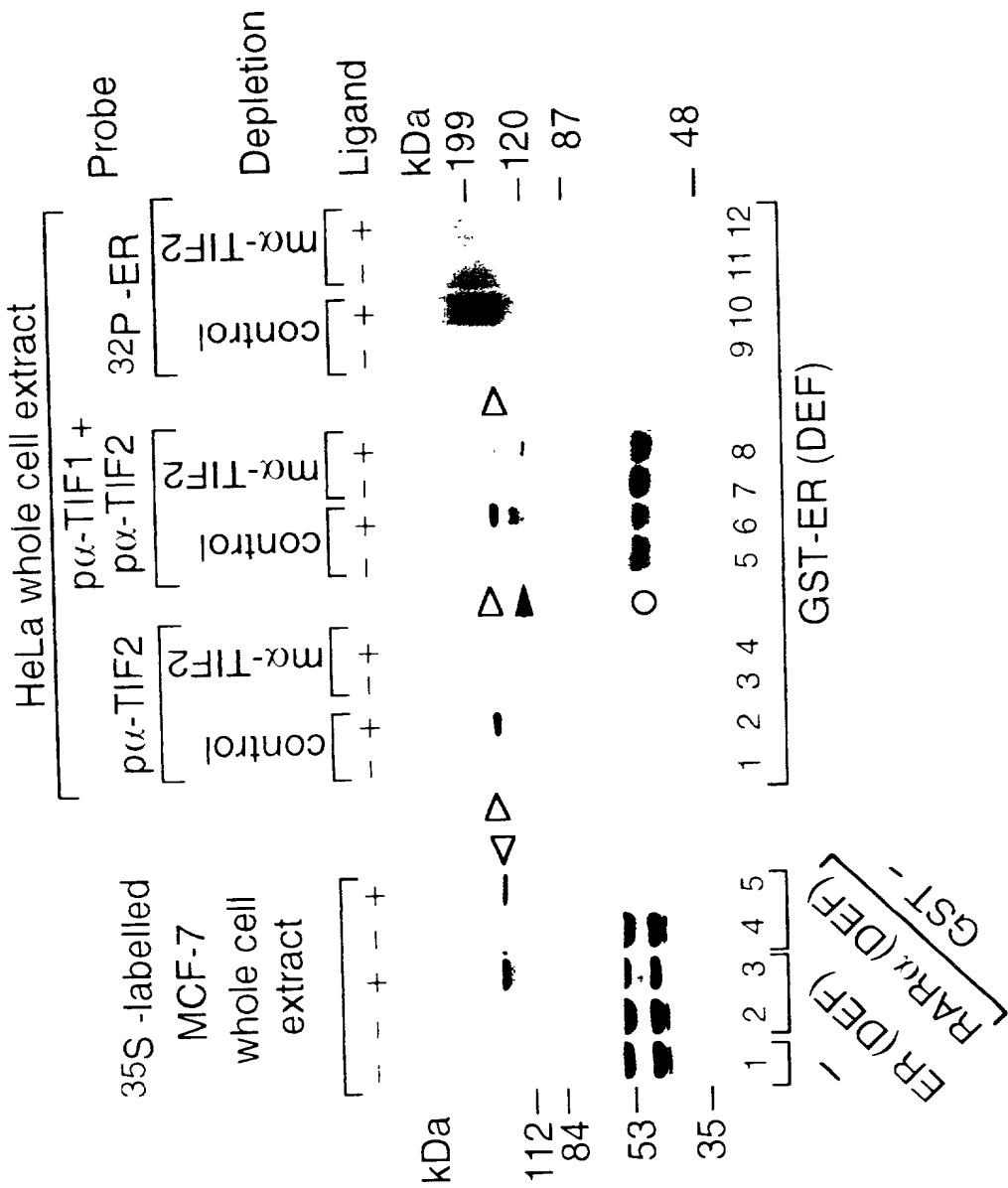


FIG. 2A

FIG. 2B

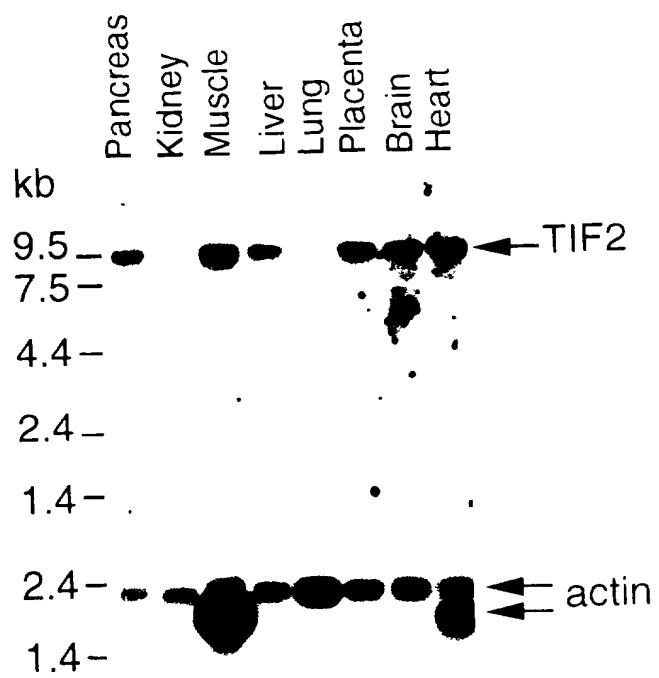


FIG. 2C

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| NLS                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                     | NLS |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----|---|
| TIF2                                                                                                                                                                                                                                                                                                                                                                                                              | .                                                                                                                   | .   | . |
| 1 MSGMGENTSOPSRATEKCDQLGPSPKRINTERKPNREQENKYTEELAELITFANFDNFNPDKDCAILKETWKQIROIKEQEKAANIDEVQKS<br>101 DVSSSTGQGVIDKDALGPMLEALDGFFFVNLEGNWVFSENVTOYLRYNQELMKNSYSITVKNLPKSTVNGWSWSEPPRRNSHTFC<br>201 RMLVKPLPDSEEFGHDNQEAHQYE TMQCF AVSQPKSIKEEGEDLQSCLICVARRYPMKPERVLPSSSEFTTRODLQGKITSLDISTMRAAMKPGWEVDLV<br>301 RRC1QKFHAQHGEVSYSYAKRHHHEVLRQGLAFSQIYRFSLSDGTVAAGTKSKLIRSQTNEPQLVISLHMLHREQNYCVMPDLTGQTMCKPLNPSS | MSIPRVPNSVNPSTS...PAHGVARSSLPPS                                                                                     |     |   |
| SRC-1                                                                                                                                                                                                                                                                                                                                                                                                             | .                                                                                                                   | .   | . |
| 401 NSPAHQALCSGNPGQDMTLSSNINFPINGPKEQMGMGRFGSGGMNHVSGM.<br>30 NSNMVSTRINRQSSSDLHSSHSN.....                                                                                                                                                                                                                                                                                                                        | QATTPOGSNSYALKWNSPSQSSPGWMPPGQPTSMLSPPRTRNSPGV<br>SSNSQGSFGCSPGSQIVANVALNKQASSQSKPSLNUNNPPMEGTGISLAQ...FMSPRRQVTSGI |     |   |
| 497 AGSPRTPPSQFSPGS.LHSPVGVCSS..GNSHSYTNSSLNALQALSECHGVSLGSSLASPDLKGKGNLQNSPVNMPPPLSKMGSLDSKDCFGLYGEP<br>118 ATRPRMPNNSFPNISTLSSPGMTSSACNNNNRSYNSNIPVTSLSQGMNEGPNSVGFSASSPVLROWSSQNSPSRLN QP.AKAESENKIEIASTLNEMI                                                                                                                                                                                                  | ► TIF 2.1                                                                                                           |     |   |
| 594 EGTTGQAESSCHPGEQKETNDPNLPPAVSSERADGQSRLLHD SKGQTKLQLQ  TKSDQ..<br>217 QSDNNSSDGKPLDGLLHNNDR.....LSDGDSKY..SQTSHKLVQLLTTAEQQLRHADITSKDVLSCIGTSNSASANSGGSCPSSHSSLT                                                                                                                                                                                                                                              | .MEPSPLASSLSDTINKDOSTGSLPGSGSTHGTSKE                                                                                |     |   |
| 686 KHK1LHRLLQDSSSPVDLAKLTAEATGKDLQSSESSTAP..GSEVT KQEPVSPKKKE...NALLRYLKDOD....TKD1G1PEITPKLERLDSKTDP<br>306 RHKL1LHRL1LQE.GSPSDITLTSVEPDKKDSASTSVSVTQVQGNSS KLEDAKKESKDHLQRLRLLDKDEKDLRSTPNLSDDVVKVKVERKE.QMDP                                                                                                                                                                                                  | ► TIF 2.2                                                                                                           |     |   |
| 776 ASNTKLJAMKTEKEEMSFEPCDQPGSELDNLEEILDILQN.SQLPQLFPDTRPGAPAGSVDKQAIIIDLMLQTAENSPTVPGAAQKTALRISQSTFNNPR<br>404 CNTNPTPMTKAYPEEIKLEAQSQFTADLQDFDQLLPTLEKAAPQLPGLCTDRMDGAVTSVTIKSE.....TIKSEIPASLQSATAR...                                                                                                                                                                                                         | ► TIF 2.3                                                                                                           |     |   |

FIG. 3A

075 DEGALLDQL..YLALRNF DGLLE IDRAL G IPELV .SQSQAVDPEQF SSQDSN ..IMLEQKAPVF PQQYASQAQMAGQS YSPM QDDPN FHTMCQRPSYATLR  
 |||::||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :||| :|||  
 548 DEKA L EQLVSEL SSKDTE LAEL DRA G DKL VQGG GLDV SERFP PQQATPL MEERPNL YSQPYSSPFTANLP .SPF QG ...MVRQKPSLGTMP

249 QROMHQQQVQORTIIMRRCQGLNMTPSMVAPSGMPATMSNPRIPQANAQQFFPPPNYC.....  
743 QRQLIQ....QRQAMLMRQSF..GNLPPSSGLPVQTGNPRLPQGAPQQFPPPNYGTNPCTPPASTSPFSQLAANPEASLNNSMVSRCMTGNICQ

307 ..... IQQQDPGFTGATTTPQSPLMSPRMAHTQSPM<sup>W</sup>QQSQANPAYQAPSIDINGWAQQNMSSGGNSMFQQQSPPHFGQOANTSMYSVN  
837 FGTCINPQMQQNWFQYPGAGGMVPQEANFAPSLSPGSSMVPMPITPPQSSLQQTTPASGYQSP.DMKAWQQAGIGNNNVFSQLAVQNQ.PTPAQPGVY.N

387 NNNINVSMAINTNCGMSSMMQMTGQISMTSUTSVTSVTSQSSMGPEQVNDPALRGGNLFPNQLPGMDMIKQEGDTRKYC\*  
934 NMSITVSMAGGNNTVNQNMNPMMAMQMQM...SSLQMPGMNTVCPEQINDPALRHTGLYCNLQSSTDLKTEADGTQQVQVQFADVQCTVNLVGDPYLN

EIG3B

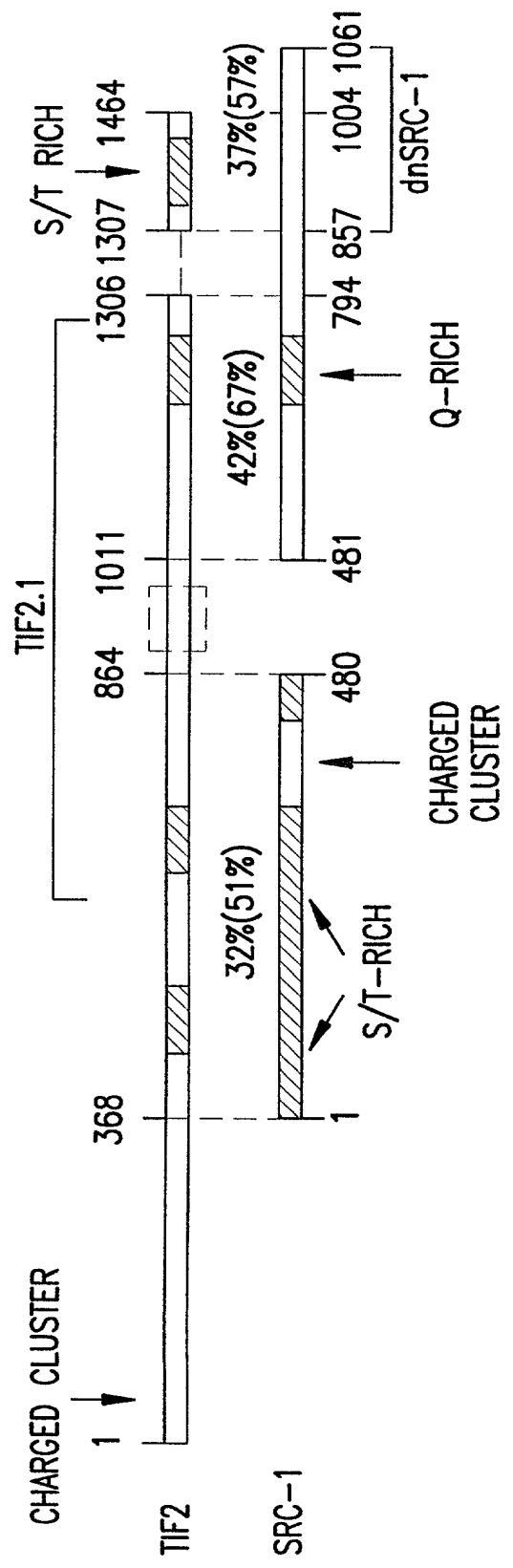


FIG.3C

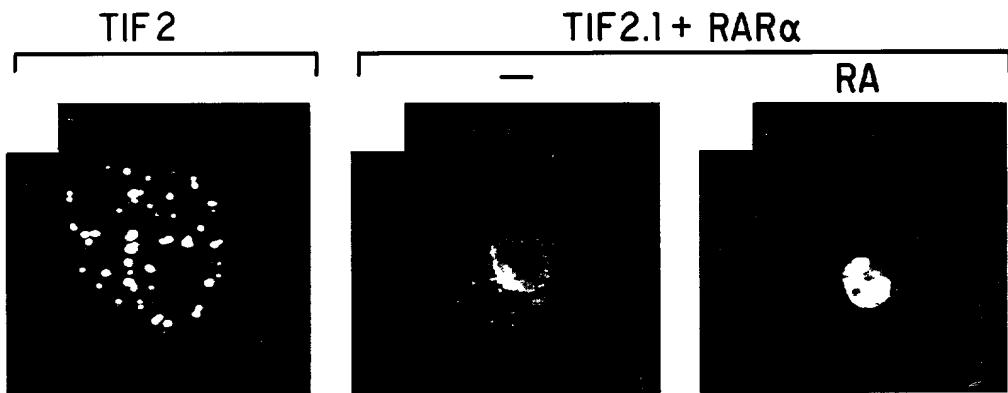


FIG.4A

FIG.4B

FIG.4C

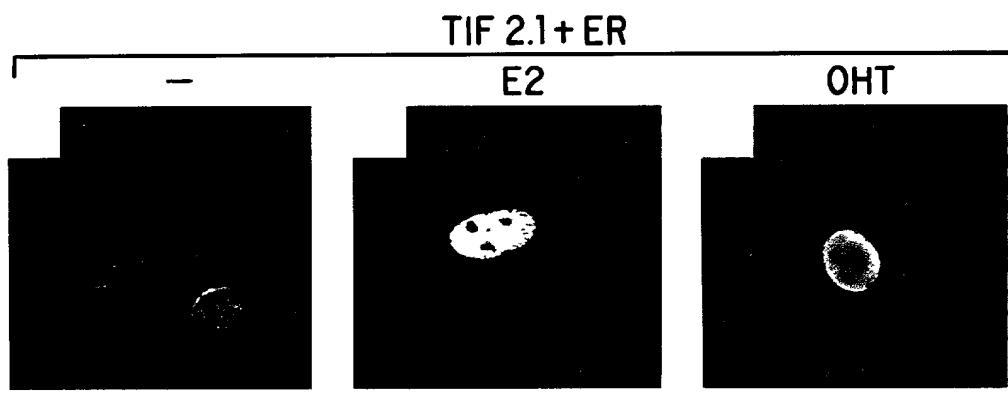


FIG.4D

FIG.4E

FIG.4F

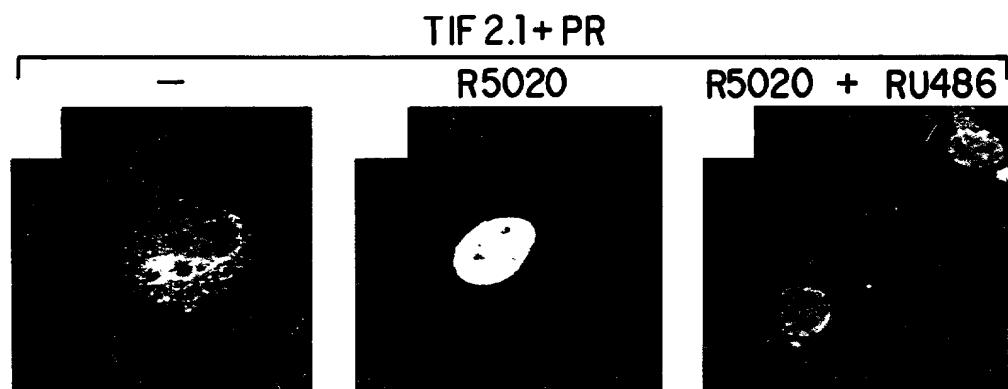
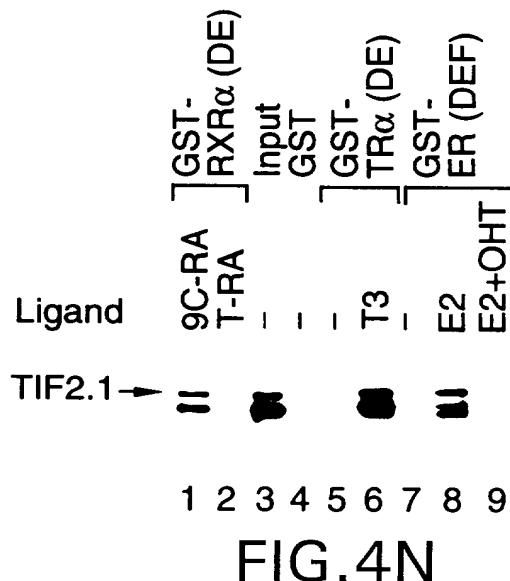
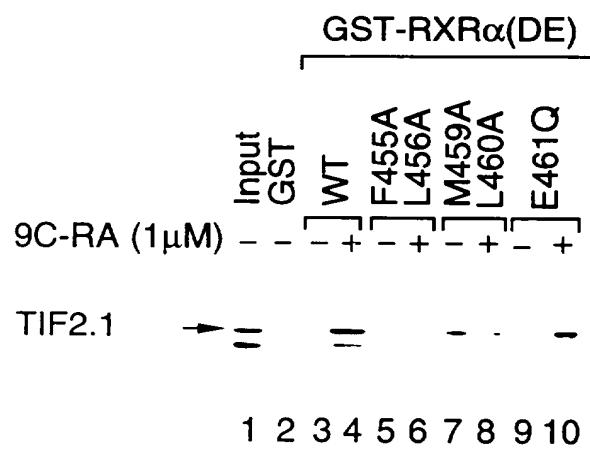
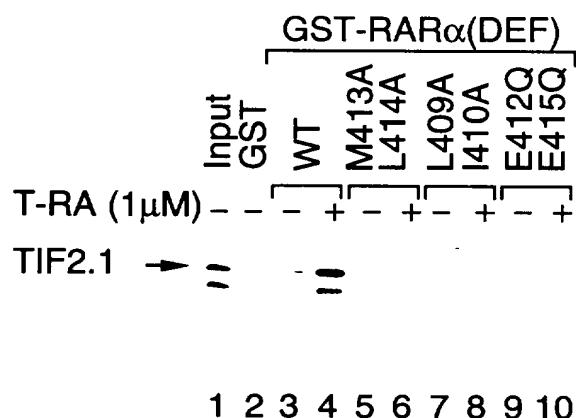
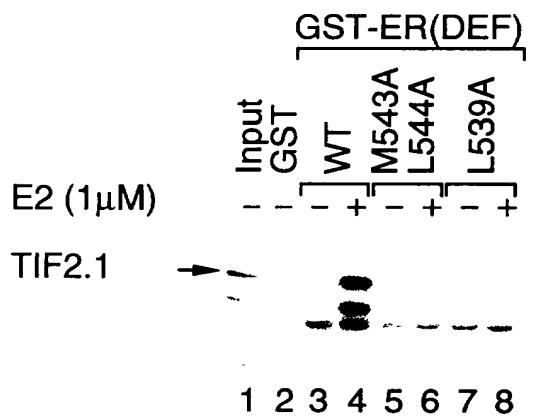


FIG.4G

FIG.4H

FIG.4I



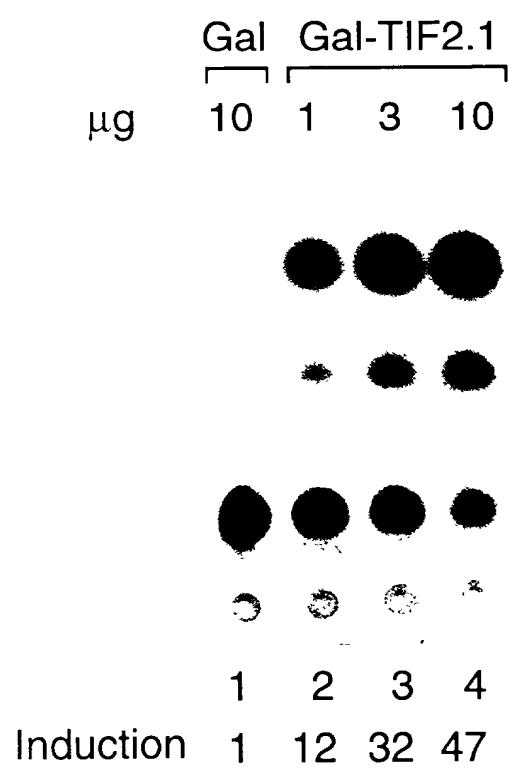


FIG.5A

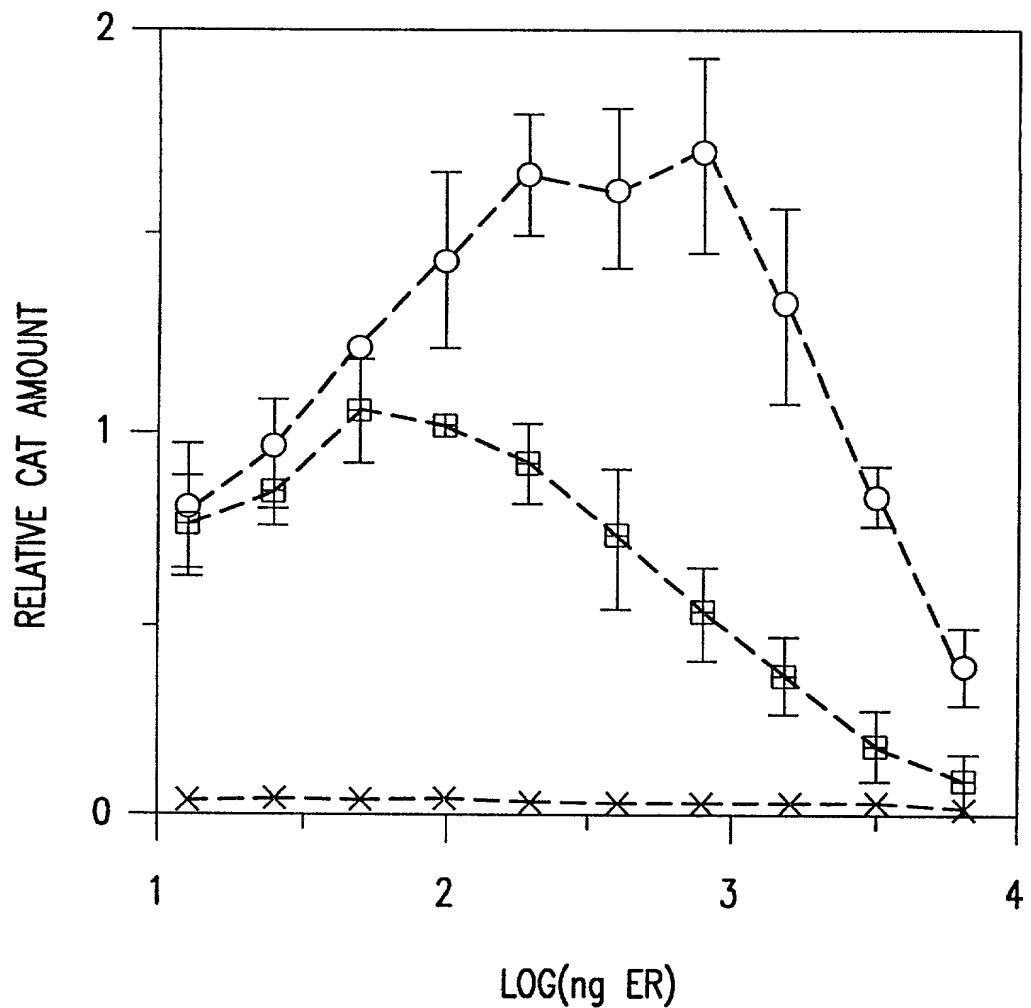


FIG.5B

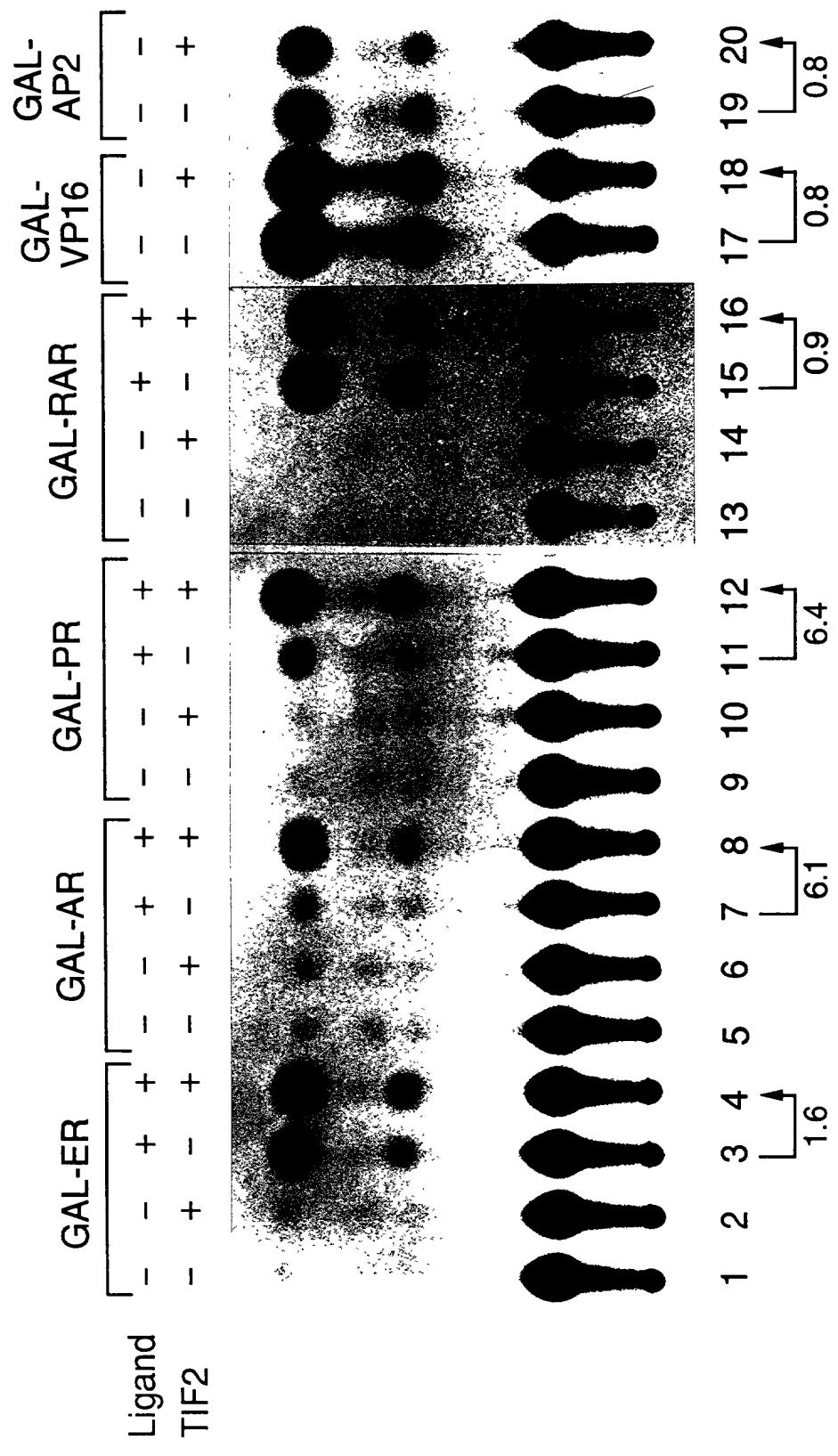
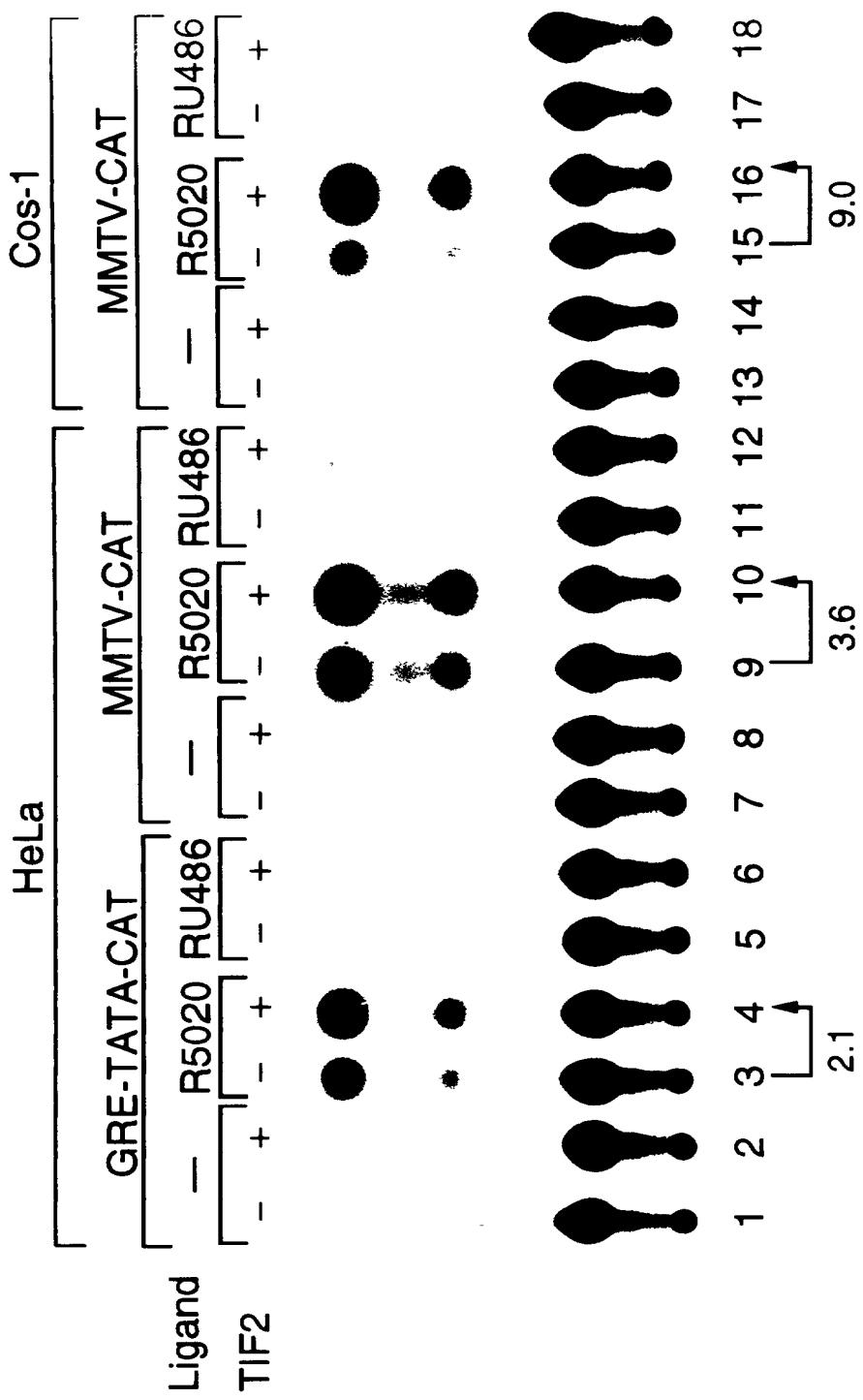


FIG. 5C



**FIG. 5D**

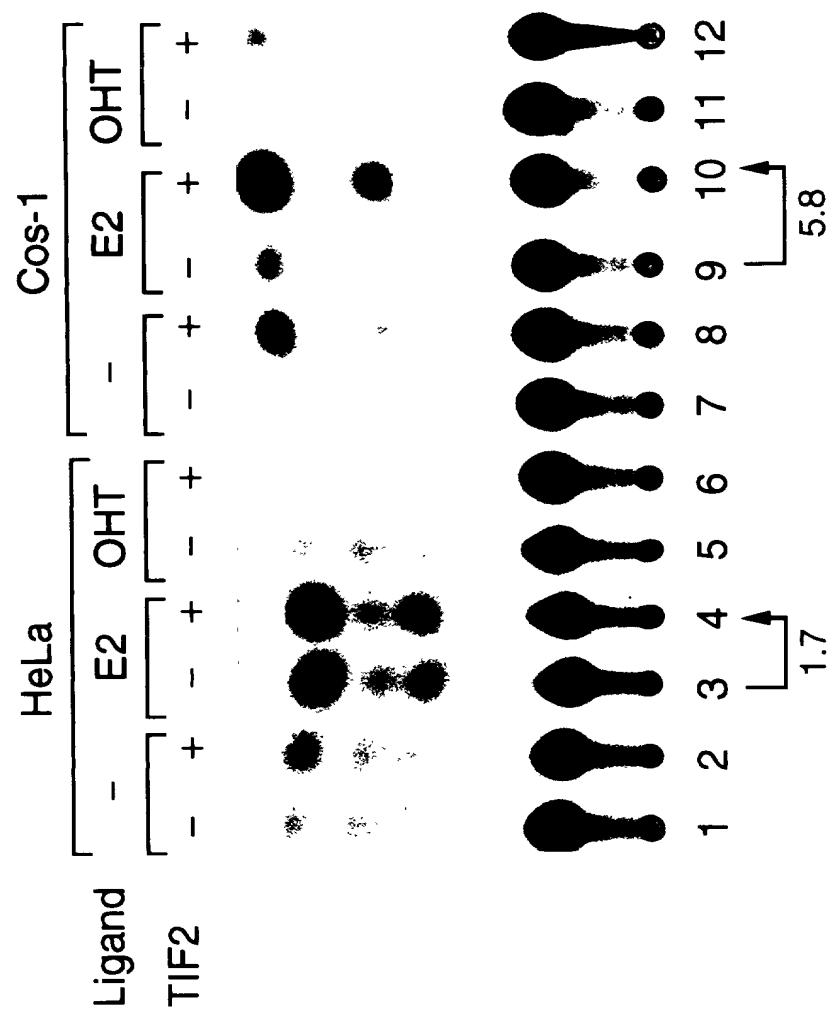
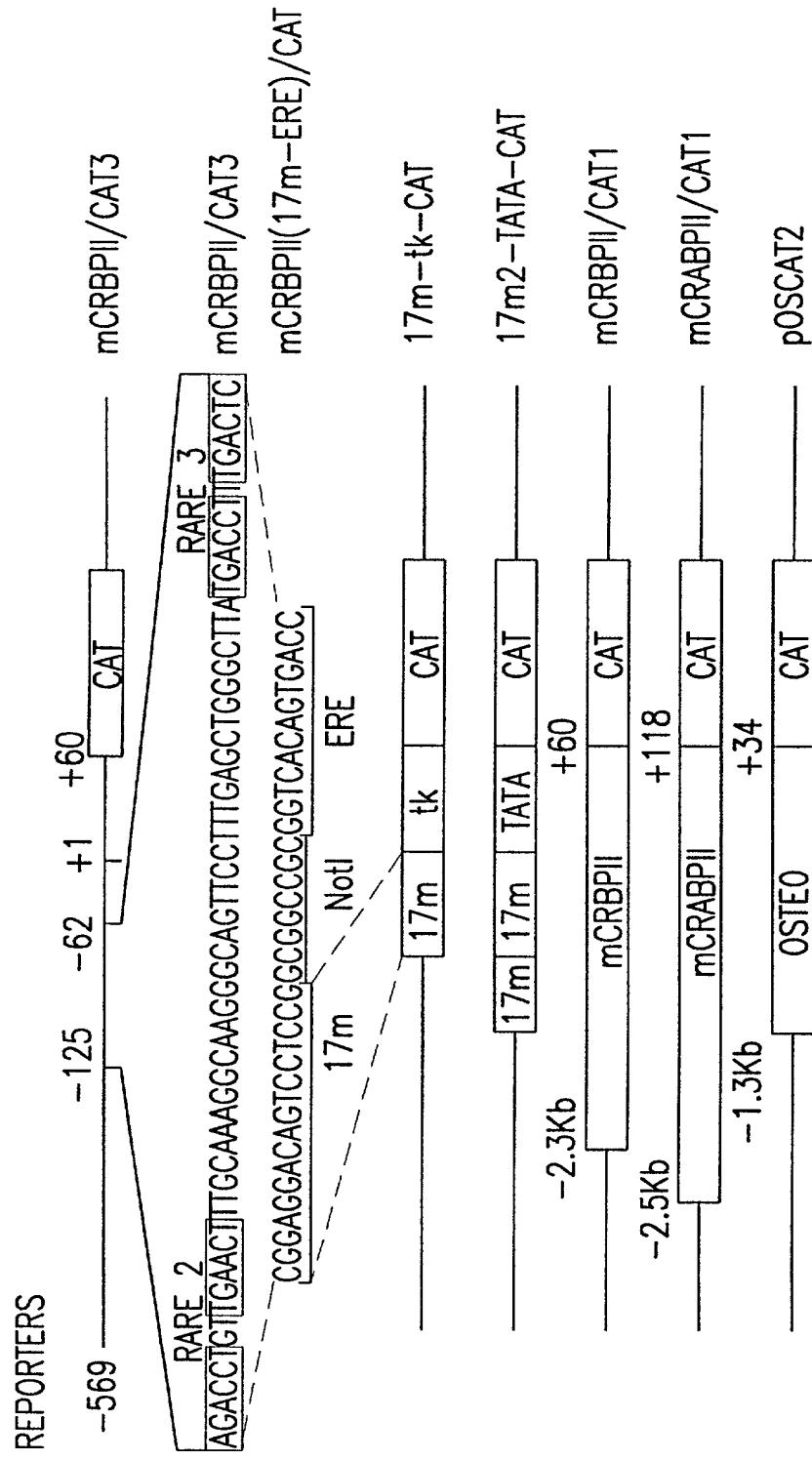


FIG.5E

**FIG. 6A**

## RECEPTORS

|                        |                                |     |
|------------------------|--------------------------------|-----|
| RAR $\alpha$ 1         | 1                              | 462 |
|                        | A1   B   C   D   E/F           |     |
| RAR $\beta$ 2          | 1                              | 448 |
|                        | A2   B   C   D   E/F           |     |
| RAR $\gamma$ 1         | 1                              | 458 |
|                        | A1   B   C   D   E/F           |     |
| RAR $\alpha\Delta A$   | 61                             | 462 |
|                        | B   C   D   E/F                |     |
| RAR $\alpha\Delta AB$  | 1 60 86                        | 462 |
|                        | A1   C   D   E/F               |     |
| RAR $\alpha\Delta AB$  | 84                             | 462 |
|                        | C   D   E/F                    |     |
| RAR $\alpha 1C88G$     | 1 880-G                        | 462 |
|                        | A1   B   C   D   E/F           |     |
| dnRAR $\alpha$ 1       | 1                              | 396 |
|                        | A1   B   C   D   E             |     |
| RAR $\alpha 1$ -ER.Cas | 1 83 154                       | 462 |
|                        | A1   B   C   D   E             |     |
|                        | RAR $\alpha 1$ ER RAR $\alpha$ |     |
|                        | 185 250                        |     |

RAR $\alpha 1$ (AB)-ER(C) 1 87 176 282  

|            |
|------------|
| A1   B   C |
|------------|

  
 RAR $\alpha 1$  ER

RAR $\beta 2$ (AB)-ER(C) 1 80 176 282  

|            |
|------------|
| A2   B   C |
|------------|

  
 RAR $\gamma 2$  ER

RAR $\gamma 1$ (AB)-ER(C) 1 89 176 282  

|            |
|------------|
| A1   B   C |
|------------|

  
 RAR $\gamma 1$  ER

|                         |                |     |
|-------------------------|----------------|-----|
| RXR $\alpha$            | 1              | 467 |
|                         | AB   C   D   E |     |
| RXR $\beta$             | 1              | 448 |
|                         | AB   C   D   E |     |
| RXR $\gamma$            | 1              | 463 |
|                         | AB   C   D   E |     |
| RXR $\alpha\Delta AB$   | 140            | 467 |
|                         | C   D   E      |     |
| RXR $\alpha C160A$      | 1 160C-A       | 467 |
|                         | AB   C   D   E |     |
| dnRXR $\alpha$          | 1              | 448 |
|                         | AB   C   D   E |     |
| dnRXR $\alpha\Delta AB$ | 140            | 448 |
|                         | C   D   E      |     |
| RXR $\gamma\Delta AB$   | 139            | 463 |
|                         | C   D   E      |     |
| dnRXR $\beta$           | 1              | 429 |
|                         | AB   C   D   E |     |
| dnRXR $\beta\Delta AB$  | 123            | 429 |
|                         | C   D   E      |     |

RXR $\alpha$ (AB)-ER(C) 1 139 176 282  

|        |
|--------|
| AB   C |
|--------|

  
 RXR $\alpha$  ER

RXR $\beta$ (AB)-ER(C) 1 122 176 282  

|        |
|--------|
| AB   C |
|--------|

  
 RXR $\beta$  ER

RXR $\gamma$ (AB)-ER(C) 1 138 176 282  

|        |
|--------|
| AB   C |
|--------|

  
 RXR $\gamma$  ER

FIG.6B

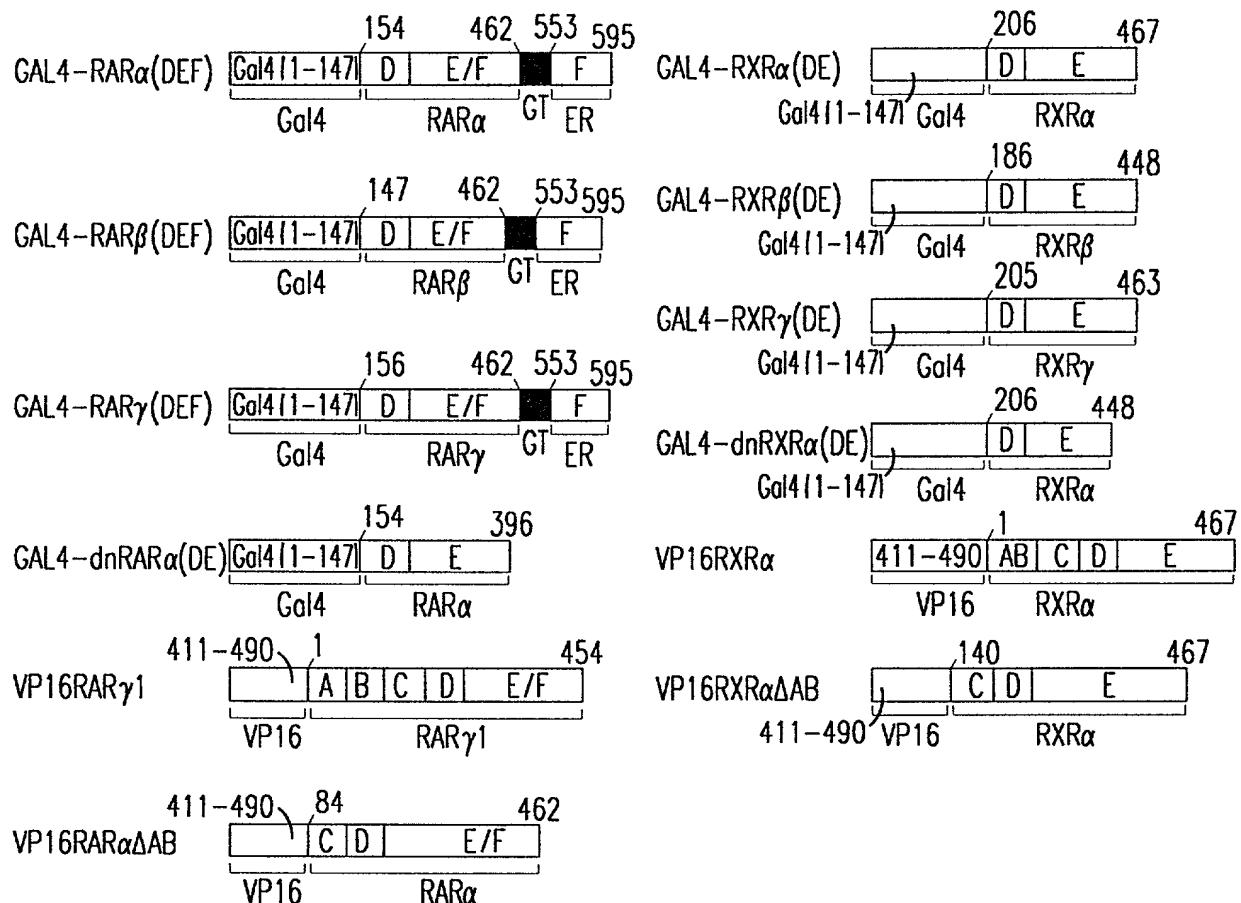


FIG. 6C

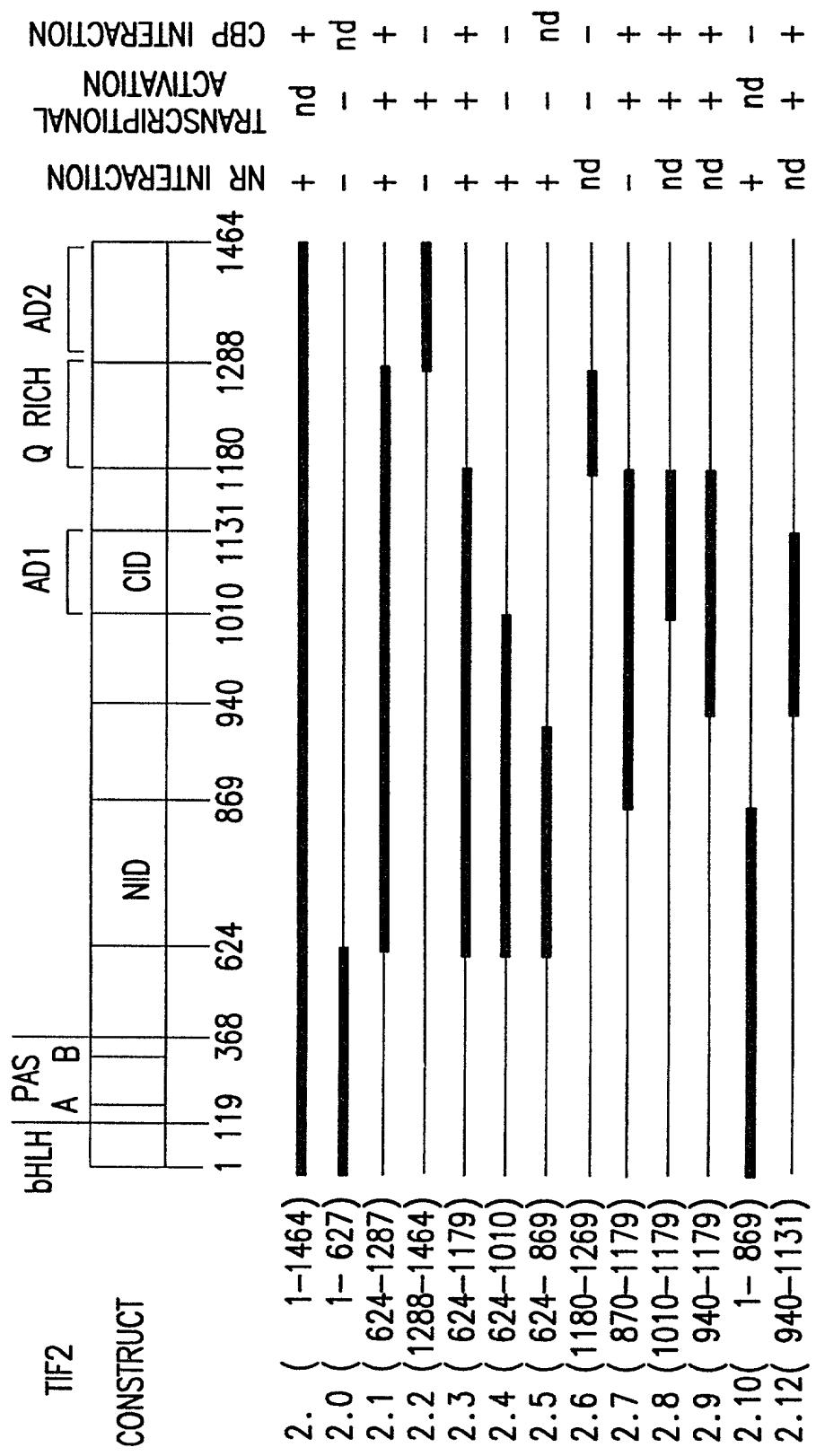


FIG.7A

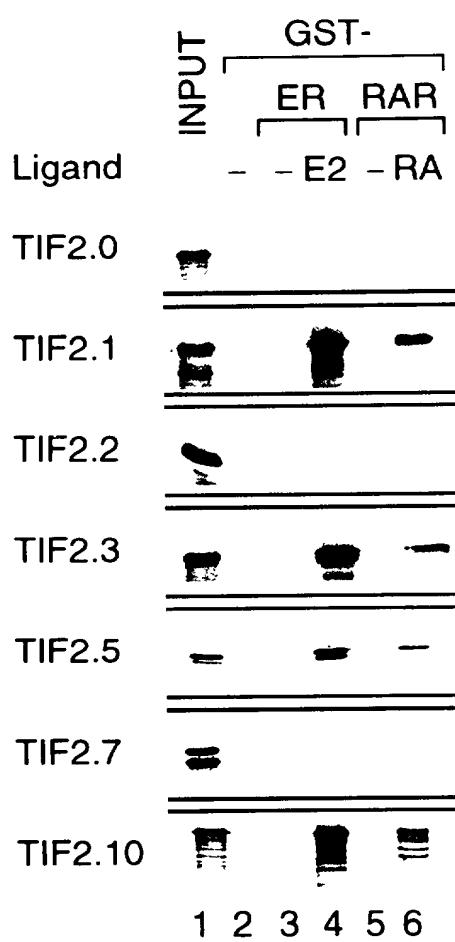


FIG. 7B

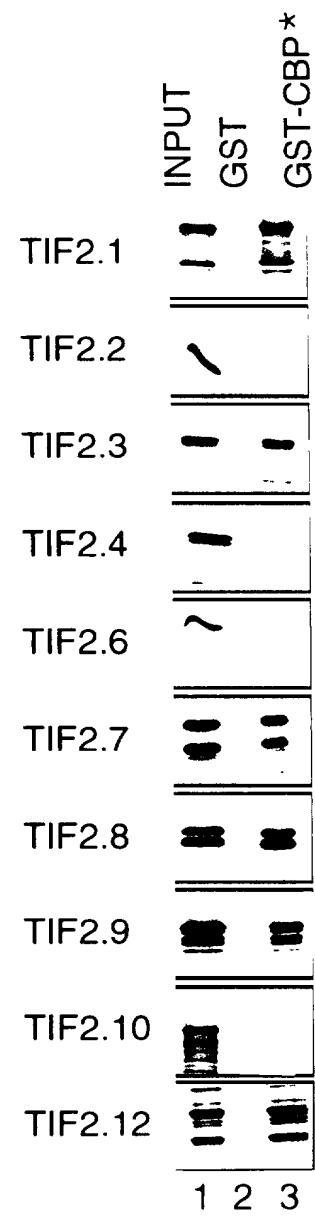


FIG. 7D

Fold Induction of  
(17M)5-G-CAT

| WB<br>Cos-1 | GAL-<br>TIF | Cos-1    | HeLa      |
|-------------|-------------|----------|-----------|
|             | 2.0         | < 2      | < 2       |
|             | 2.1         | 32 ± 9   | 14 ± 2    |
| r           | 2.2         | 60 ± 5   | 31 ± 5    |
|             | 2.3         | 172 ± 16 | 122 ± 19  |
|             | 2.4         | < 2      | < 2       |
|             | 2.5         | < 2      | < 2       |
| I           | 2.6         | < 2      | < 2       |
|             | 2.8         | 324 ± 16 | 1220 ± 28 |
|             | 2.7         | 300 ± 74 | 1002 ± 67 |
|             | 2.9         | 298 ± 19 | 610 ± 31  |
|             | 2.12        | 592 ± 29 | 772 ± 16  |

FIG.7C

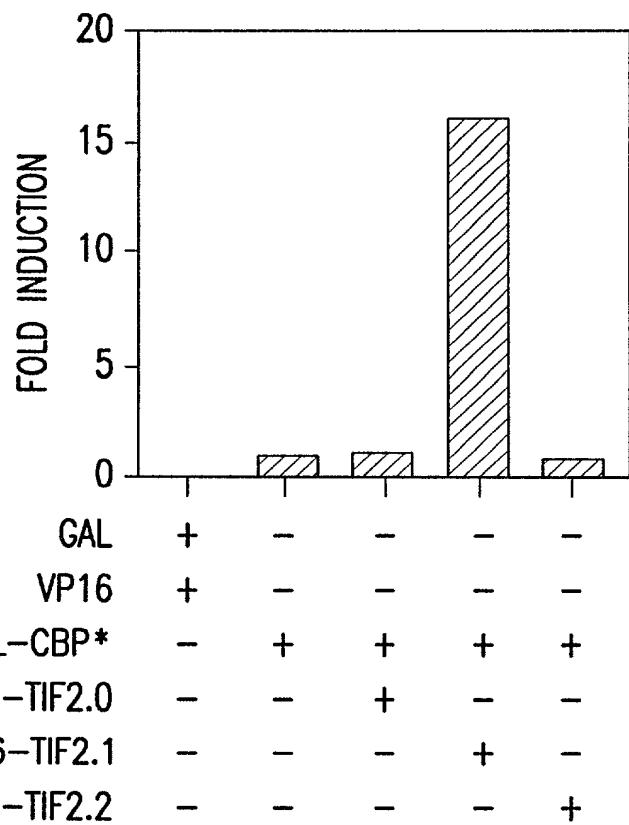


FIG.7E

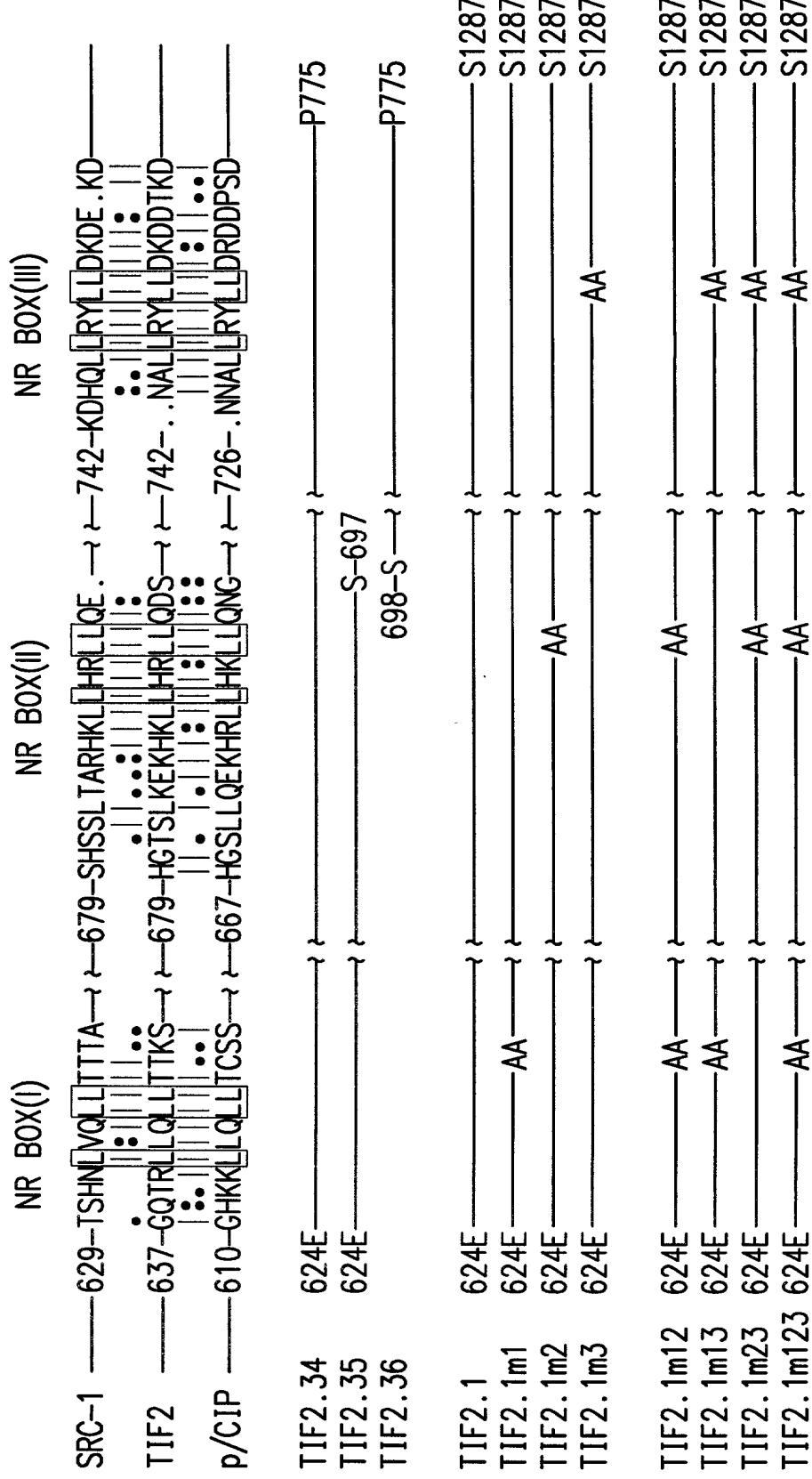


FIG.8A

NR box

|               |     |                        |
|---------------|-----|------------------------|
| TIF1 $\alpha$ | 724 | - RSI TS    NSS - 735  |
| RIP140        | 933 | - FNV KQL  SEN - 944   |
| TRIP3         | 95  | - SAT RSLLL NPH - 106  |
| TIF2(I)       | 638 | - QTK  LQLL TTKS - 648 |
| TIF2(II)      | 687 | - HKI HRL  QDSS - 698  |
| TIF2(III)     | 742 | - NAL RYL  DKDD - 753  |

FIG.8B

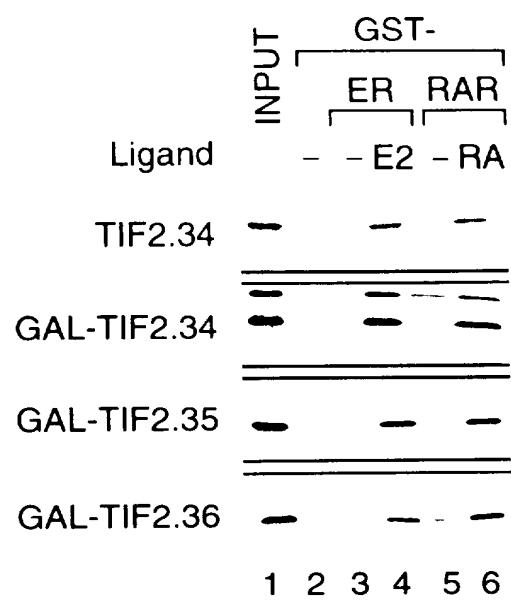


FIG.8C

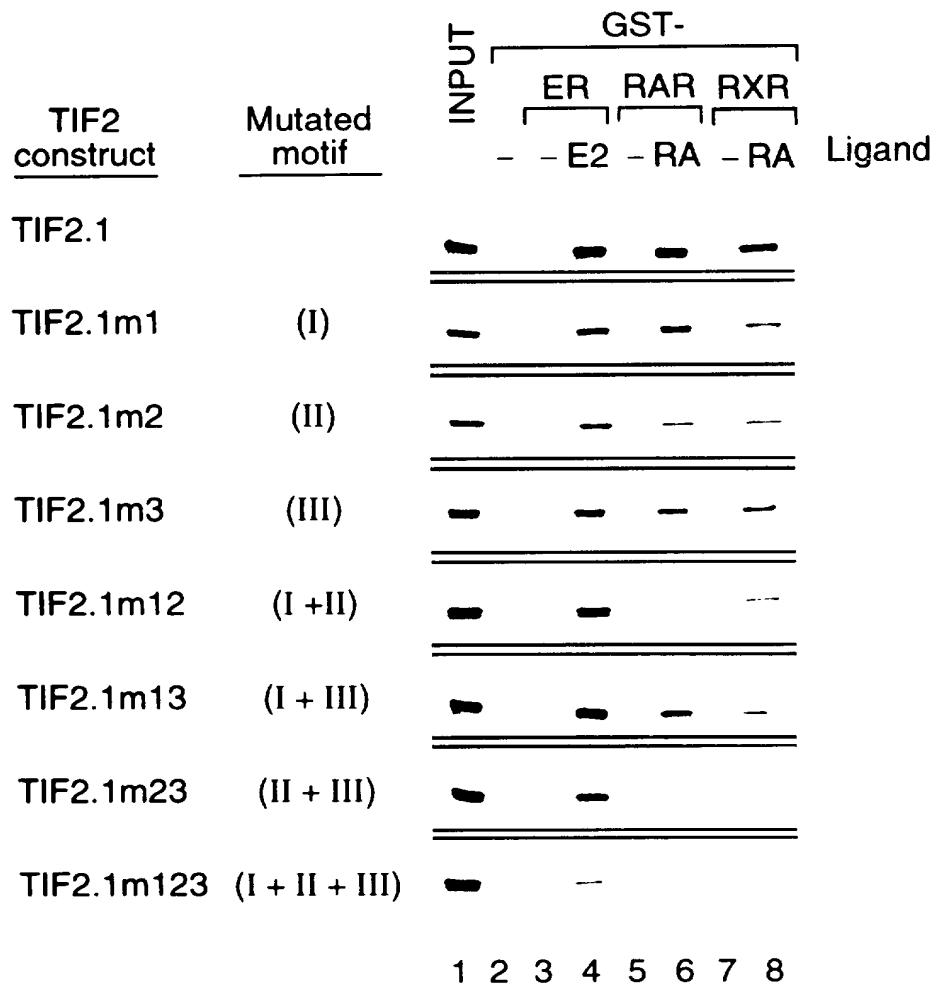


FIG.8D

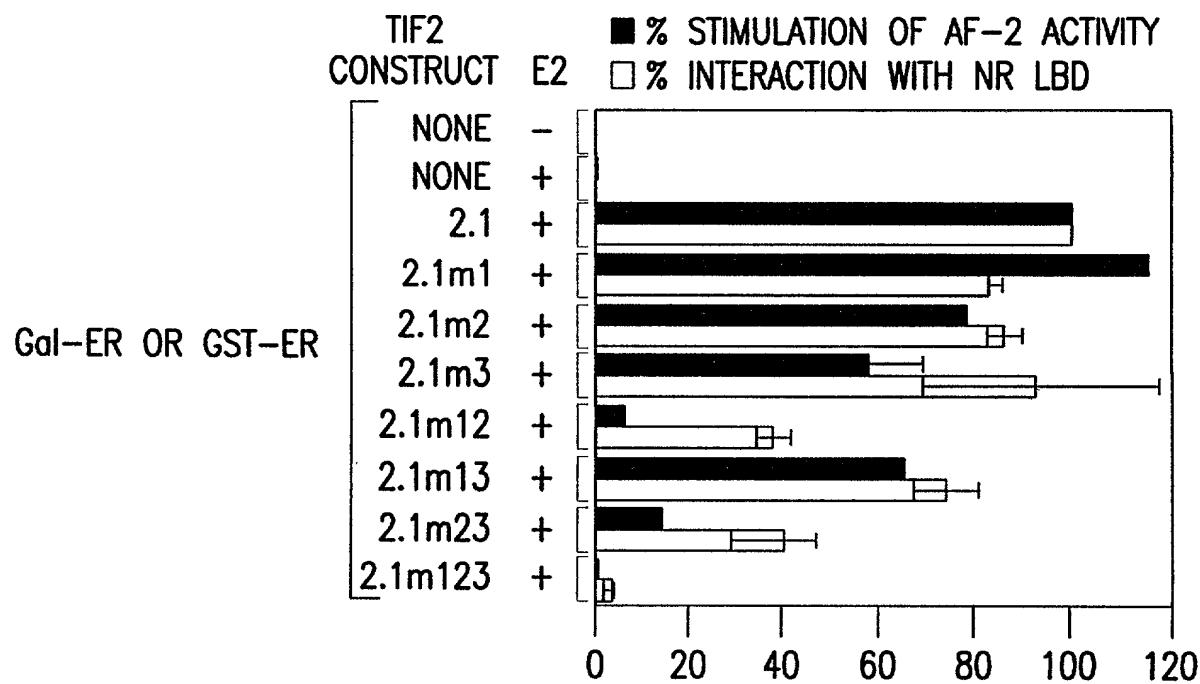


FIG.8E

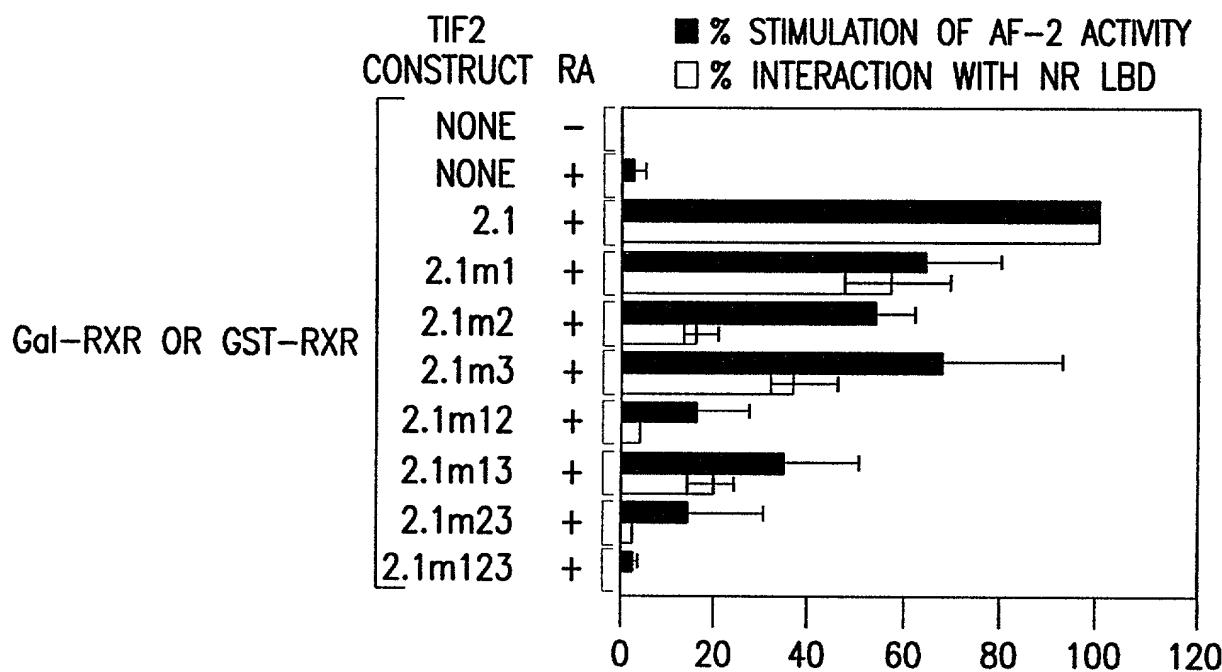


FIG.8F

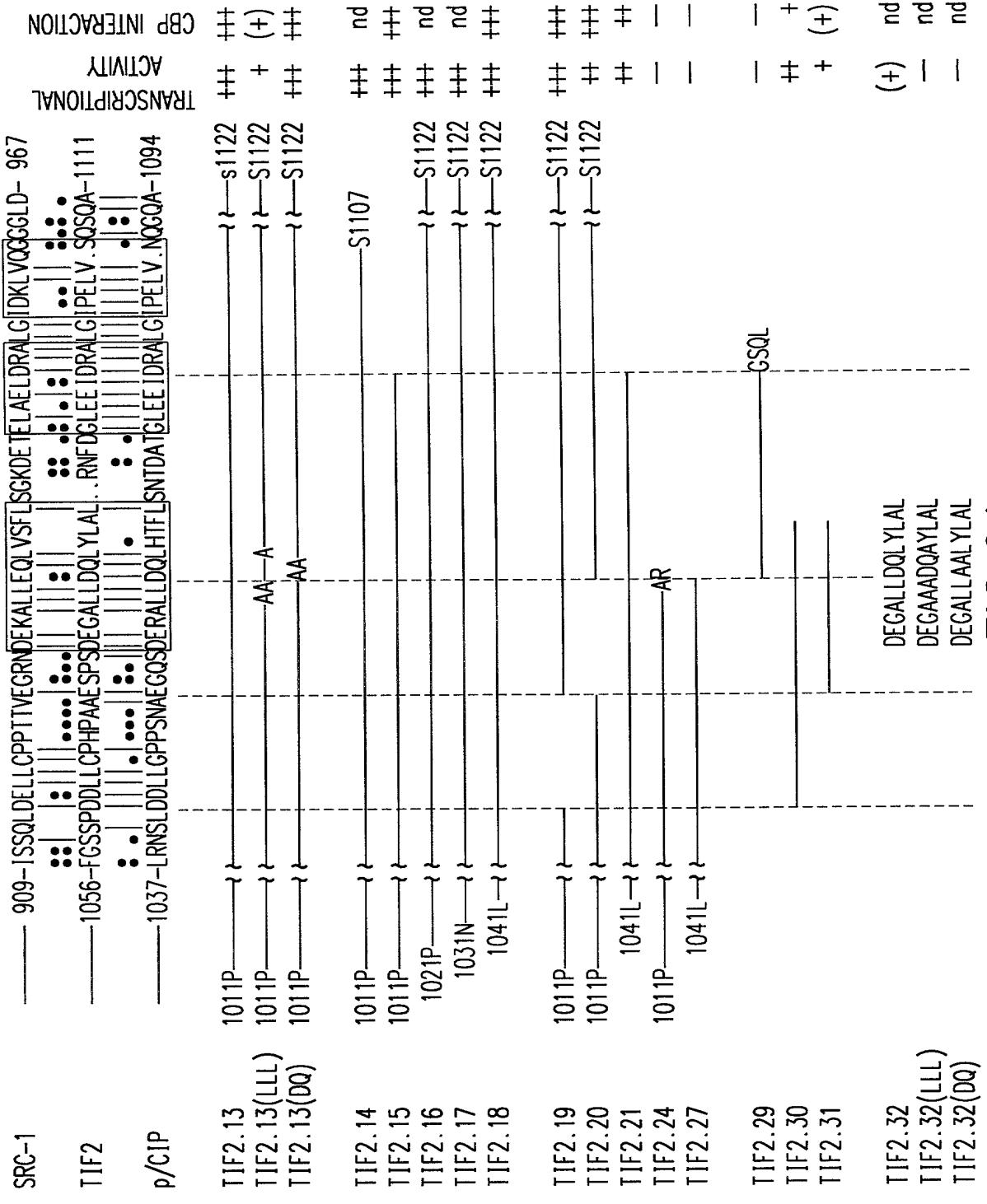


FIG. 9A

Fold Induction of  
(17m)5-TATA-CAT

| GAL-TIF  | <u>Cos-1</u> |           | <u>HeLa</u> |           |
|----------|--------------|-----------|-------------|-----------|
|          |              |           |             |           |
| 2.13     | 462          | $\pm$ 9   | 704         | $\pm$ 33  |
| 2.14     | 392          | $\pm$ 13  | 674         | $\pm$ 23  |
| 2.15     | 279          | $\pm$ 21  | 316         | $\pm$ 49  |
| 2.16     | 390          | $\pm$ 34  | 597         | $\pm$ 54  |
| 2.17     | 389          | $\pm$ 50  | 581         | $\pm$ 58  |
| 2.18     | 314          | $\pm$ 16  | 432         | $\pm$ 19  |
| 2.19     | 341          | $\pm$ 67  | 777         | $\pm$ 30  |
| 2.20     | 107          | $\pm$ 11  | 314         | $\pm$ 27  |
| 2.21     | 129          | $\pm$ 8   | 173         | $\pm$ 22  |
| 2.24     |              | < 2       |             | < 2       |
| 2.27     |              | < 2       |             | < 2       |
| 2.29     |              | < 2       |             | < 2       |
| 2.30     | 98           | $\pm$ 13  | 117         | $\pm$ 6   |
| 2.31     | 35           | $\pm$ 3   | 34          | $\pm$ 3   |
| 2.32     | 2.8          | $\pm$ 0.2 | 5.9         | $\pm$ 0.9 |
| 2.32(LL) | 1.4          | $\pm$ 0.2 | 1.5         | $\pm$ 0.1 |
| 2.32(DQ) | 1.7          | $\pm$ 0.3 | 1.2         | $\pm$ 0.2 |

FIG.9B

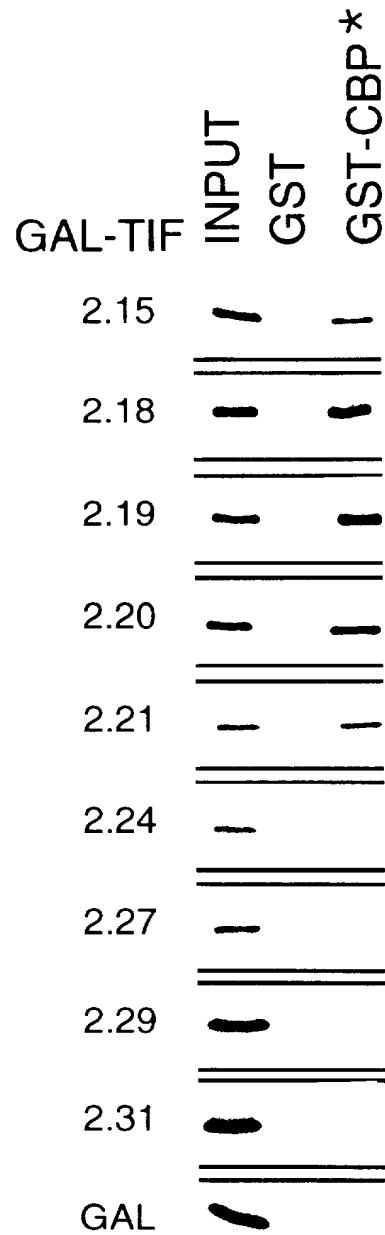
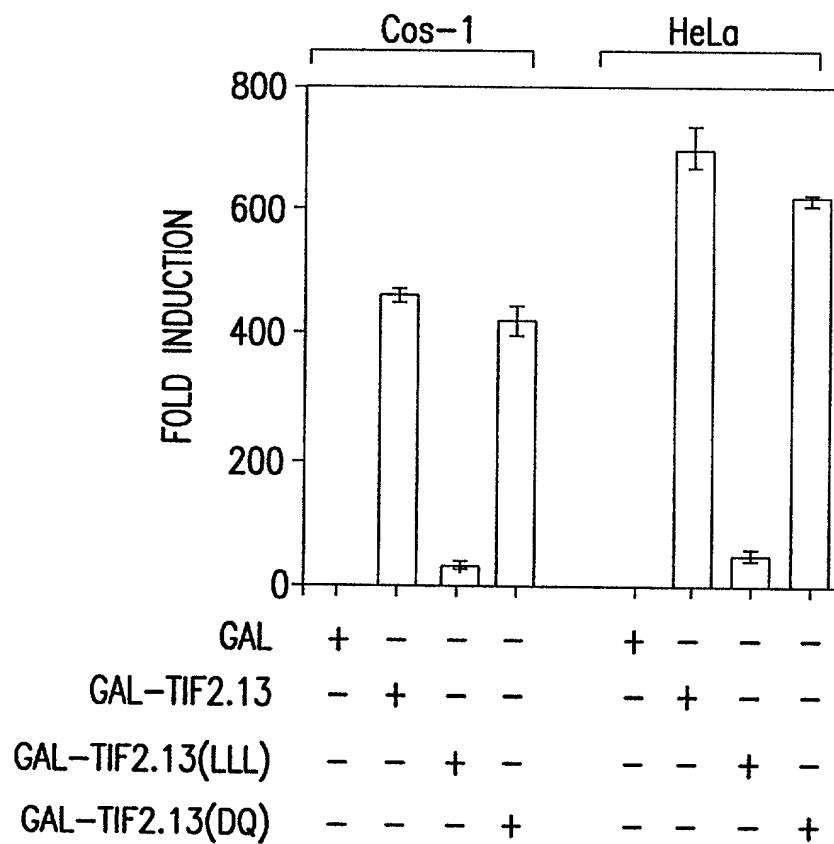
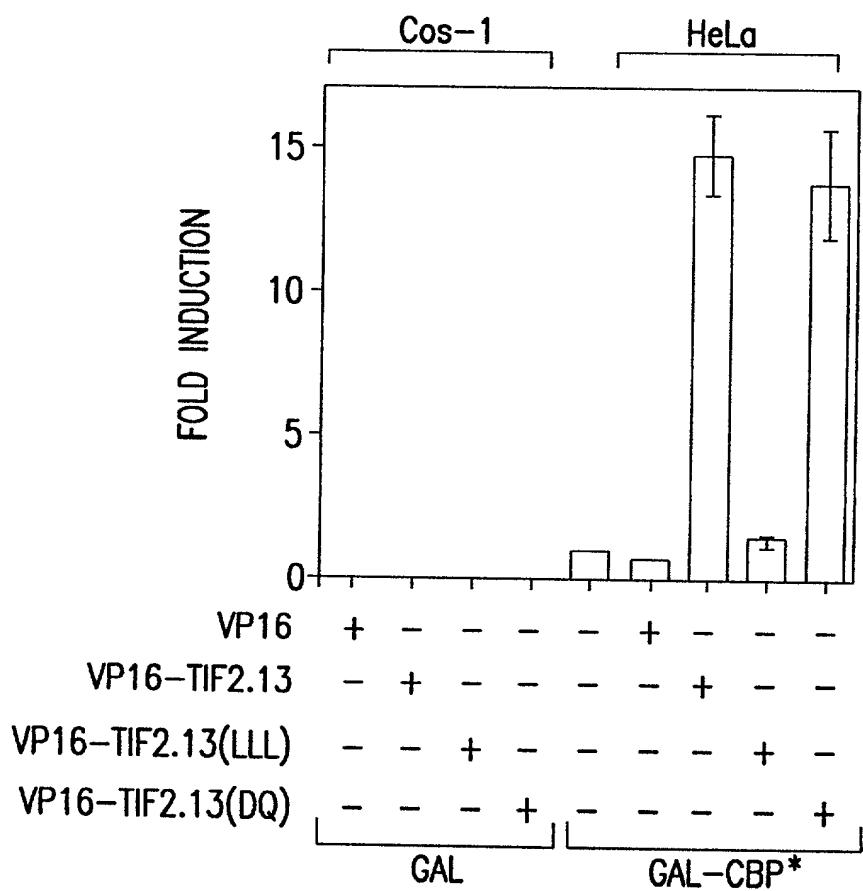


FIG.9C

**FIG.10A****FIG.10B**

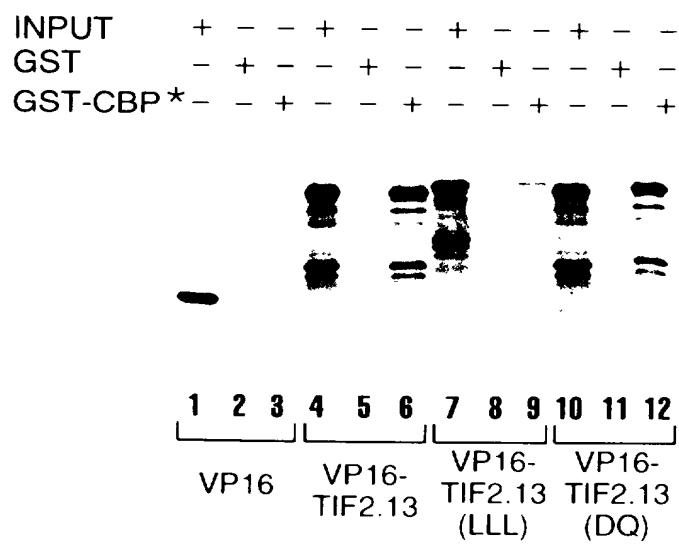


FIG.10C

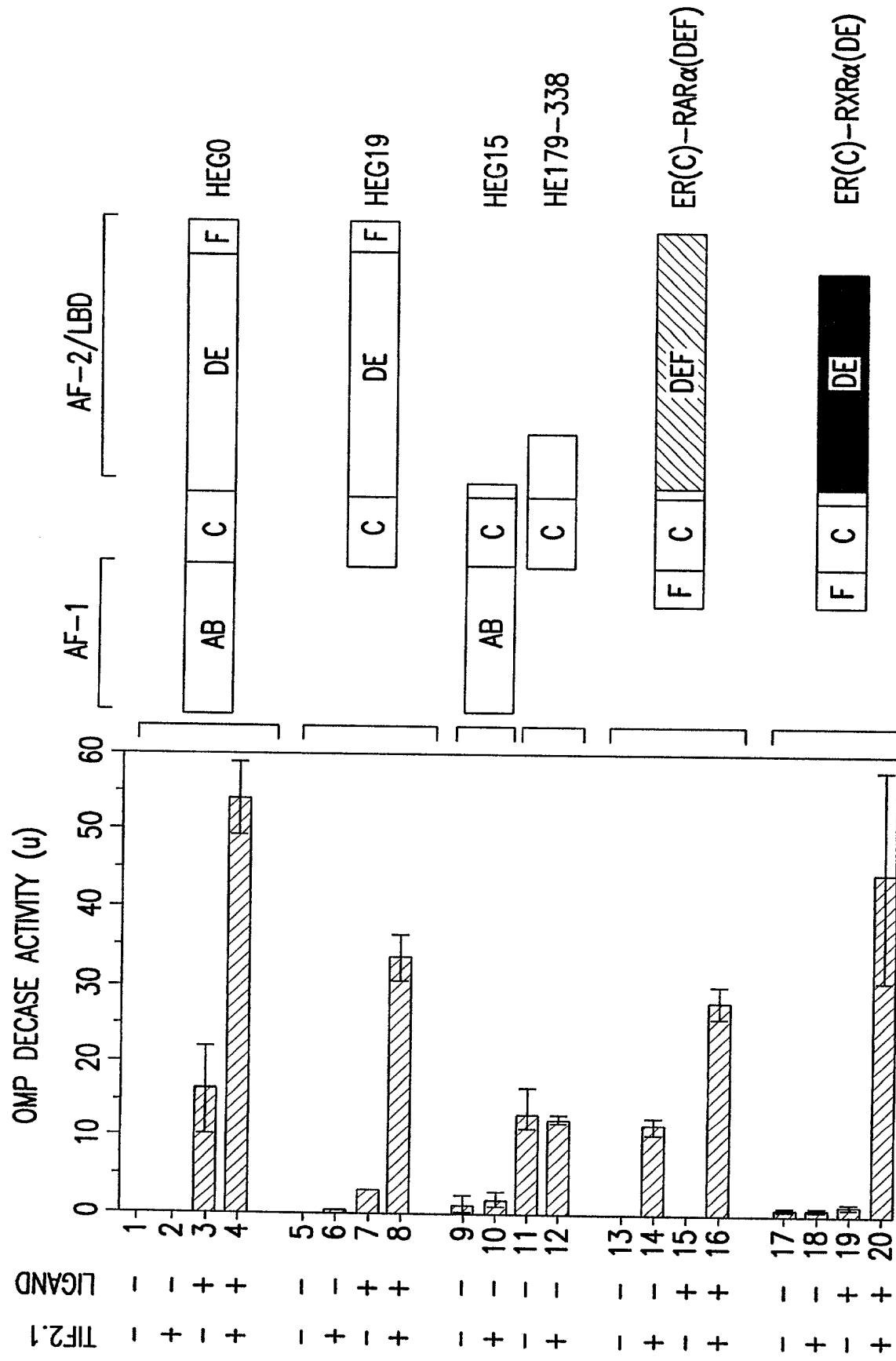


FIG. 11

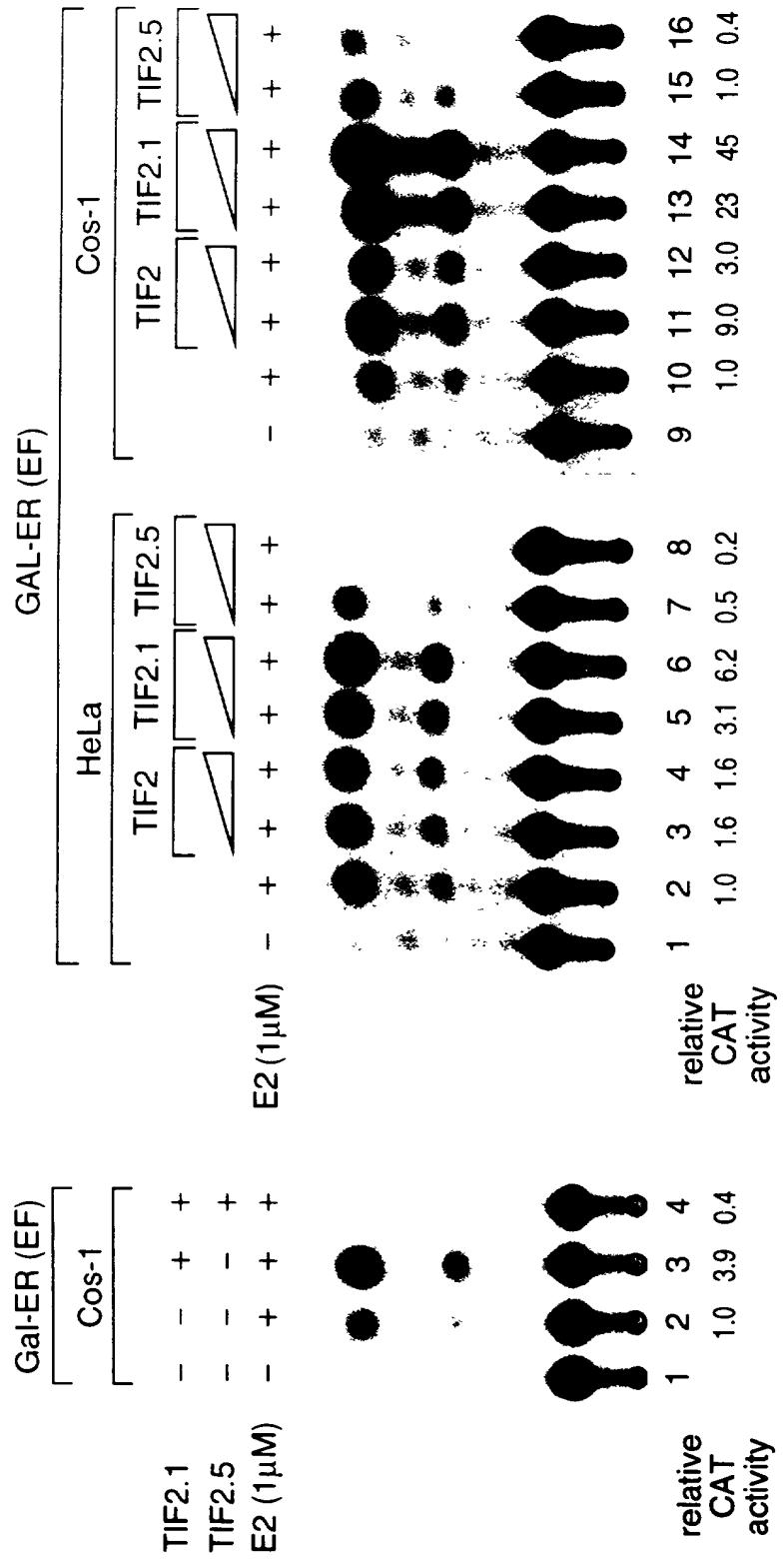


FIG. 12A

FIG. 12B

CAT activity

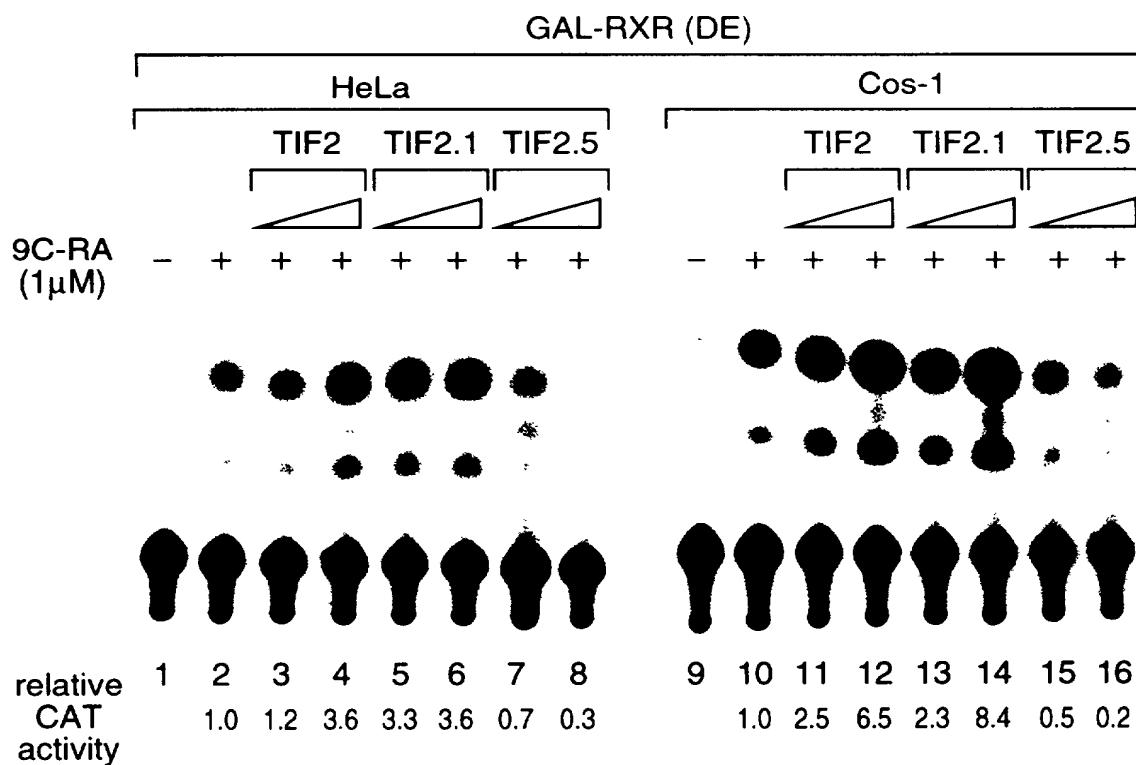


FIG.12C

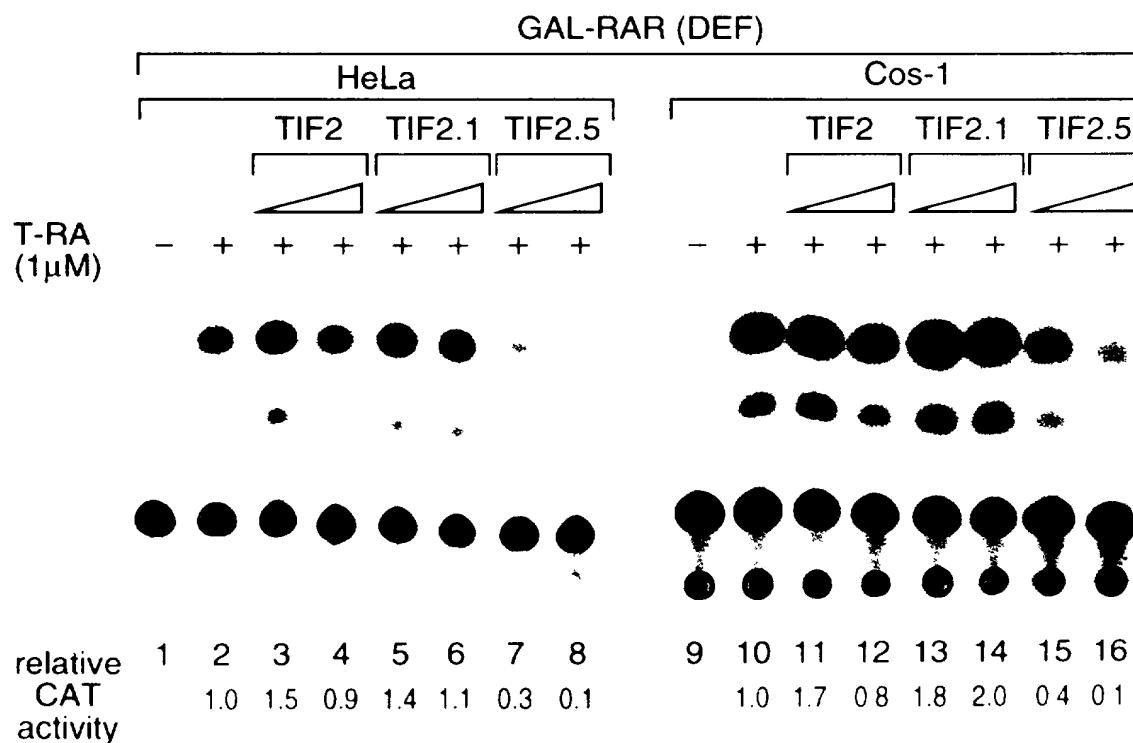


FIG.12D